

Utilities Accommodation Policy

M 22-86

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**Washington State
Department of Transportation**

Environmental and Engineering Service Center
Design Office



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This policy was established in cooperation with the utility industry, AASHTO policy guidelines on accommodating utilities within highway freeway rights of way, state laws and regulations governing the accommodation of utility facilities, and in compliance with federal-aid policies and procedures.

It is the objective of this policy to prescribe the means by which utility installations, when located in a manner not interfering with the free and safe flow of traffic or otherwise impairing the highway of its visual quality, may be accommodated within state rights of way.

The contents of the Utilities Accommodation Policy include:

1. Chapter 468-34 WAC, Utility Lines-Franchises and Permits.
2. Requirements involving underground utility encroachments.
3. Control Zone Guidelines-Utilities.
4. Memorandum of Understanding relating to Scenic Classification for Utilities Accommodation on State Highway rights of way.
5. Scenic Classification of State Highways, listing of 1989 with corrections.
Including addition of State Routes added by Legislative RJT Act of 1991.

Note:

This document is the August 1999 Utilities Accommodation Policy with a revised Scenic Classification of State Highways, listing. This classification is the 1989 listing with corrections caused by miscoding, transcription, oversight, and changes resulting from the Legislative RJT Act of 1991. Routes that have not been classified have a provisional BX(p) classification.

/s/ Gerald L. Gallinger

Gerald L. Gallinger
Director, Real Estate Services

Chapter 468-34 WAC

UTILITY LINES -- FRANCHISES AND PERMITS

WAC

468-34-010	Application
468-34-020	Costs
468-34-030	Determination of need for franchise hearing
468-34-040	Franchise hearings
468-34-050	Notice of filing
468-34-060	Protests
468-34-070	Uncontested applications
468-34-080	Procedure on protests
468-34-090	Hearing officers
468-34-100	Policy on accommodation of utilities on highway rights of way
468-34-110	Definition of terms
468-34-120	Application of policy to various types of right of way
468-34-130	Location
468-34-140	Utility tunnels and bridges
468-34-150	Design
468-34-160	Permits and franchises
468-34-170	Permits and franchises—Contents
468-34-180	Accommodation where prior right
468-34-190	Pipelines --Location and alignment
468-34-200	Pipelines --Cover
468-34-210	Pipelines --Encasement
468-34-220	Pipelines --Appurtenances
468-34-230	Pipelines --Uncased carriers
468-34-240	Pipelines --Restrictions against varied use
468-34-250	Pipelines --Installation
468-34-260	Pipelines --Adjustment
468-34-270	Installations on highway structures
468-34-280	Overhead power and communication lines—Type of construction
468-34-290	Vertical clearance
468-34-300	Overhead lines – Location
468-34-310	Underground power and communication lines
468-34-320	Conversion to underground or relocation of overhead lines – Responsibility
468-34-330	Scenic enhancement
468-34-340	Miscellaneous
468-34-350	Control zone guidelines

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-010, filed 10/10/95, effective 11/10/95. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-010, filed 12/20/78. Formerly WAC 252-04-010.]

WAC 468-34-020 Costs.

(1) The applicant shall pay the reasonable cost to the department for investigating, handling and granting the franchise or permit, including but not limited to fees of hearing officers and reporters, including basic overhead charges upon the application and for providing an inspector during construction and/or maintenance of the utility facility as follows:

For permit/franchise/amendment

Category 1	\$500.00
Category 2	\$300.00
Category 3	\$150.00
For franchise consolidation	\$300.00
For franchise renewal	\$250.00
For franchise assignment	\$50.00

together with an additional charge in the amount of expenses, if any, actually incurred by the department: Provided, That no charge shall be made for applications for franchise or permit where the applicant is the United States or any of its agencies, or a utility anticipating relocation from its private easement acquired or to be acquired by the department for construction or reconstruction of a state highway.

(2) An equitable portion of the added costs of design and construction of highway structures shall be charged to any utility company which is required to pay the costs of relocation of its facilities and/or to any utility company making new installations.

(3) Before any construction work is started, a surety bond in an amount required by the department, but not less than one thousand dollars, written by a surety company authorized to do business in the state of Washington, may be required by the department to insure completion of construction, including the restoration of surfacing, slopes, slope treatment, top soil, landscape treatment, drainage facilities and cleanup of right of way for a period ending not more than one year after date of completion, except the applicant shall be required to maintain an individual bond for a period to two years after date of completion where the utility facility disturbs the traveled lanes or usable shoulder. A blanket surety bond may be maintained covering multiple franchises or permits in lieu of individual bonds at the department's discretion. A blanket surety bond shall be in an amount of not less than ten thousand dollars.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-020, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-020, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-020, filed 12/20/78. Formerly WAC 252-04-020.]

WAC 468-34-010 Applications.

Applications for franchises and permits submitted to the Washington state department of transportation shall conform with the following requirements:

(1) Applications shall be submitted upon forms available from the department.

(2) Applications shall include the utility facility description plus additional plans and data for CAT 1 and CAT 2 installations.

(3) Applications shall indicate compliance with the standards as set forth in the POLICY ON ACCOMMODATION OF UTILITIES ON HIGHWAY RIGHTS OF WAY as contained in these rules and any amendments thereto.

(4) The application shall discuss alternate possibilities, especially when a location on or across a limited access facility is considered necessary. Reasons for need to adhere to location as proposed must be adequately set forth in the application.

WAC 468-34-030 Determination of need for franchise hearing.

(1) Upon the filing of an application for franchise, the department shall determine whether the work involved with the franchise may:

(a) During construction, significantly disrupt the flow of traffic or use of driveways or other facilities within the right-of-way; or

(b) During or following construction, cause a significant and adverse effect upon the surrounding environment, in order to determine whether a hearing or hearing opportunity is required.

(2) If the department deems it to be in the public interest a hearing or hearing opportunity may be required for any franchise application.

A hearing or hearing opportunity will normally be required for a franchise which involves any of the following:

(a) Overhead transmission lines in excess of 35 kV;

(b) Facilities involving the installation of pipe larger than eighteen inches nominal diameter;

(c) Conduits requiring an excavation wider than three feet;

(d) Pipelines carrying transmittants which are flammable, corrosive, expansive, energized or unstable and are larger than four inches nominal diameter;

(e) Pressurized carrier pipes larger than twelve inches nominal diameter;

(f) Underground installations of any size that require excavation through landscaped areas which are authorized by permit and which are maintained by owners of abutting property.

(3) The department may dispense with holding a hearing where the planned facility has already been or is the subject of environmental land use or other hearings or where the applicant presents evidence of a direct contact with owners of abutting property.

(4) Those franchise applications which the department determines warrant a hearing or hearing opportunity shall be processed in accordance with WAC 468-34-040 through 468-34-090. All other franchise applications may be approved by the department without being processed in accordance with WAC 468-34-040 through 468-34-090, including franchises previously filed but not advertised.

[Statutory Authority: Chapter 47.44 RCW and 1980 c 28. 80-13-042 (Order 58), § 468-34-030, filed 9/15/80.]

WAC 468-34-040 Franchise hearings.

Arrangements for a hearing before the secretary of transportation or his designee at the earliest possible date will be made by the department on any matters with respect to which a protest has been filed. Based on written objections or disputes which the department is unable to resolve or upon which it may have a divergent recommendation, the applicant and/or affected parties will be given the opportunity to appear before the secretary or his designee in support of their requests or contentions.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-040, filed 12/20/78. Formerly WAC 252-04-040.]

WAC 468-34-050 Notice of filing.

Upon the filing of application for franchise, the department shall cause notice thereof to be given in the county or counties in which any portion of the highway upon which the franchise applied for is located, at the expense of the applicant, by publishing a notice once a week for two consecutive weeks, in a newspaper having a general circulation in such county or counties. The notice shall state the name of the applicant and a description of the state highway or part thereof over which the franchise application extends.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-050, filed 10/10/95, effective 11/10/95. Statutory

Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-050, filed 12/20/78. Formerly WAC 252-04-045.]

WAC 468-34-060 Protests.

Any person whose interests would be adversely affected by the granting of a franchise may file protests thereto. No form of protest is prescribed, but such protests shall be in writing, mailed to the department of transportation at the address listed in the notice, and to the applicant at the address stated in the application for franchise, and shall briefly state the facts upon which such protest is based. No protest or amendment thereof shall be considered by the department unless received within fourteen days after the notice of filing has been posted and published.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-060, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-060, filed 12/20/78. Formerly WAC 252-04-050.]

WAC 468-34-070 Uncontested applications.

If no protest to a franchise application is received within fourteen days after the notice of filing has been posted and published, the department may grant the franchise without further proceedings.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-070, filed 12/20/78. Formerly WAC 252-04-052.]

WAC 468-34-080 Procedure on protests.

If a protest or protests to an application are filed with the department, the secretary or his designee shall, at the time for hearing such application, insofar as is practicable, state the issues raised by the protest or protests, take such other steps as it may deem necessary for complete hearing on such issues, and continue such hearing from time to time until the hearing is completed in accordance with these rules.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-080, filed 12/20/78. Formerly WAC 252-04-055.]

WAC 468-34-090 Hearing officers.

The secretary may designate any qualified person as hearing officer with respect to hearings on any franchise application. Subject to later review and ruling by the secretary or his designee, such hearing officer may:

(1) Administer oaths and affirmations, examine witnesses, and receive evidence;

(2) Admit evidence which possesses probative value commonly accepted by reasonable, prudent men in the conduct of their affairs, giving effect to the rules of privilege recognized by law and excluding incompetent, irrelevant, immaterial and unduly repetitious evidence;

(3) Rule on offers of proof and receive relevant evidence;

(4) Regulate the course of the hearing;

(5) Hold conferences for the settlement or simplification of the issues by consent of the parties;

(6) Dispose of procedural requests or similar matters;

(7) Prepare the proposed order, including findings of fact and conclusions of law, disposing of such application and submit the same to the secretary or his designee for consideration.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-090, filed 12/20/78. Formerly WAC 252-04-060.]

WAC 468-34-100 Policy on accommodation of utilities on highway rights of way.

This policy shall apply to all franchises and permits issued subject to chapter 47.44 RCW to all public RCW to all public, private, and governmental utility lines that are to be located, adjusted or relocated within the rights of way of state highways other than provided for in chapter 47.24 RCW.

Nothing in this policy shall be construed as limiting the rights of the department to impose restrictions or requirements in addition to and/or deviations from those stated herein in any franchise or permit where the department deems it advisable to do so.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-100, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-100, filed 12/20/78. Formerly WAC 252-04-065.]

WAC 468-34-110 Definition of terms.

Unless otherwise stated, words and phrases used herein shall have the following meaning:

(1) Highway - A general term denoting a street, road or public way for purposes of vehicular travel, including the entire area within the right of way.

(2) Conventional highway - An arterial highway without access control.

(3) Limited access highway - A highway upon which the rights to ingress and egress, light, view and air are controlled by law.

(a) Full control of access - Means that the authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads by prohibiting crossings or direct private driveway connections at grade.

(b) Partial control of access - Means that the authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings and some private driveway connections at grade.

(c) Modified control of access - Means that the authority to control access is exercised to give preference to through traffic to such a degree that most approaches, including commercial approaches, existing and in use at the time of establishment, may be allowed.

(d) Freeway - A fully controlled limited access highway of four or more traffic lanes with the opposing traffic lanes separated by a median strip of arbitrary width.

(4) Frontage road - A local street or road auxiliary to an arterial highway for service to abutting property and adjacent areas and for control of access.

(5) Scenic route - A highway forming a part of the scenic and recreational highway system as set forth under chapter 47.39 RCW.

(6) Roadway prism - That portion of the highway right of way between back of ditch, bottom of ditch, back of curbs including slopes, shoulders, pavement and a median of less than sixteen feet in width.

(7) Roadway - The portion of a highway including shoulders, for vehicular use. A divided highway has two or more roadways.

(8) Median - The portion of a divided highway separating the traveled ways for traffic in opposite directions.

(9) Roadside - The roadside is the area between the edge of the roadway and the right of way line and unpaved medians on multilane highways.

(10) Rest area - A roadside area with parking facilities separated from the roadway provided for motorists to stop and rest. It may

include drinking water, toilets, tables and benches, telephones, information, and other facilities for travelers.

(11) Viewpoint - A roadside area provided for motorists to stop their vehicles beyond the shoulder, primarily for viewing the scenery in safety.

(12) Right of way - A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to highway transportation purposes.

(13) Clear roadside policy - The policy employed by a highway authority to increase safety, improve traffic operation and enhance the appearance of highways by designing, constructing and maintaining highway roadways as wide, flat, and rounded as practical and as free as practical from physical obstructions above the ground such as trees, drainage structures, nonyielding sign supports, utility poles and other ground-mounted obstructions.

(14) Encroachment - Unauthorized use of highway right of way as for signs, fences, buildings, etc.

(15) Restoration - A general term denoting replacing, repairing or otherwise restoring the right of way to the same or equal conditions as before any change or construction thereon.

(16) Franchise - Occupancy and use document required for longitudinal occupancy of highway rights of way in accordance with chapter 47.44 RCW.

(17) Permit - Occupancy and use document required for an occupancy of the highway rights of way other than by franchise as provided in chapter 47.44 RCW.

(18) Private lines - Privately owned facilities which convey or transmit commodities as listed in WAC 468-34-100, but are devoted exclusively to the use of the owner.

(19) Roadway structure - The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

(20) Overcrossing - A grade separation where the subject highway passes over an intersecting highway or railroad.

(21) Undercrossing - A grade separation where the subject highway passes under an intersecting highway or railroad.

(22) Backfill - Replacement of soil around and over a pipe.

(23) Bedding - Organization of soil or fine gravel to support a pipe.

(24) Overfill - Backfill above a pipe.

(25) Sidefill - Backfill alongside a pipe.

(26) Carrier - Pipe directly enclosing a transmitted fluid (liquid or gas).

(27) Casing - A larger pipe enclosing a carrier.

(28) Sleeve - Short casing through pier or abutment of highway structure.

(29) Vent - Appurtenance to discharge gaseous contaminants from casings.

(30) Coating - Material applied to or wrapped around a pipe.

(31) Conduit or duct - An enclosed tubular runway for protecting wires or cables.

(32) Cover - Depth of top of pipe below grade of roadway or ditch.

(33) Drain - Appurtenance to discharge accumulated liquid contaminants from casings or other enclosures.

(34) Encasement - Structural element surrounding a pipe.

(a) Jacket - Encasement by concrete poured around a pipe.

(b) Walled - Partially encased by concrete poured alongside the pipe.

(35) Gallery - An underpass for two or more pipelines.

(36) Grounded - Connected to earth or to some extended conducting body which serves as a ground instead of the earth.

(37) Manhole - An opening in an underground system which workmen or others may enter for the purpose of making installations, inspections, repairs, connections, and tests.

(38) Pipeline - A tubular product made as a production item for sale as such.

(39) Pressure - Relative internal pressure in psig (pounds per square inch gage).

(40) Slab - Slab between but not contacting pipe and pavement.

(41) Trenched - Installed in a narrow open excavation.

(42) Untrenched - Installed without breaking ground or pavement surface, such as by jacking or boring.

(43) Utility service connection - A service connection from a utility's distribution or feeder line or main to the premises served.

(44) Traffic control - Those provisions necessary to safeguard the public during construction activities.

(45) Normal - Crossing at a right angle.

(46) Standard specifications for road, bridge, and municipal construction - The compilation of standard requirements for road, bridge, and municipal construction issued by the Washington state department of transportation.

(47) True line and grade - A line reasonably free from variation on both horizontal and vertical alignment.

(48) Control zone guidelines - Guidelines established to control the placement of above-ground utility facilities within the highway right of way.

(49) Major reconstruction - Upgrading the capacity of the facility and/or replacement of more than fifty percent of the poles or towers within any mile.

(50) Roadbed - The graded part of the roadway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

(51) Subgrade - The top surface of the roadbed on which subbase, base, surfacing, pavement, or layers of similar materials are placed.

(52) Utility - A term denoting electric power, communication, cable television, water, gas, oil, petroleum products, steam, chemicals, sewage, drainage, irrigation, fire or police signal systems, and similar lines. Also, the term utility includes those utility-type facilities which are owned or leased by a government agency for its own use, or otherwise dedicated solely to governmental use. The term utility does not include utility-type facilities required for the support, control, operation, and maintenance of the highway system, if they are owned and controlled by the highway authority.

(53) Installation categories - Utility installations will be defined by the effect the installation will have on the highway integrity and impact to the traveling public.

(a) Category 1 installations have considerable impact on highway facilities and the public and will require a detailed review effort by more than one department office.

(b) Category 2 installations have limited impact on highway facilities and the public and may require review by more than one department office.

(c) Category 3 installations have little or no impact on highway facilities and the public and will be reviewed only by the office processing the application.

(d) Category 4 installations are same-side service connections below a specified size (see application instructions) and are exempt from the permit/franchise process except in limited access controlled areas.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-110, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-110, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-110, filed 12/20/78. Formerly WAC 252-04-075.]

WAC 468-34-120 Application of policy to various types of right of way.

The applicable policy for the accommodation of utilities on various types of highways shall be in accordance with the following:

(1) Freeways - Accommodation of utilities shall be in accordance with "A Policy on the Accommodation of Utilities on Freeway Rights of Way" issued by the American Association of State Highway and Transportation Officials (AASHTO) 1982, and amendments thereto, and this policy.

(2) Limited access highways - Accommodation of utilities shall be the same as for freeways.

(3) Conventional highways - Rural - Accommodation of utilities shall be in accordance with this policy.

(4) Conventional highways - Cities and towns - Accommodation of utilities shall be in accordance with:

(a) Underground

(i) Water and sewer - The current "Standard Specifications for Road, Bridge, and Municipal Construction."

(ii) All other facilities - Accommodation of utilities shall be in accordance with this policy.

(b) Overhead - Accommodation of utilities shall be in accordance with this policy.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-120, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-120, filed 12/20/78. Formerly WAC 252-04-085.]

WAC 468-34-130 Location

(1) Utility installations should be located to minimize need for later adjustment to accommodate future highway improvements and to permit access for servicing such lines with minimum interference to highway traffic and must be located in accordance with the control zone guidelines.

(2) Longitudinal installations should be located on a uniform alignment and grade as near as practicable to the right of way line so as to provide a safe environment for traffic operation and preserve space for future highway improvements or other utility installations.

(3) Utility line crossings of the highway shall be normal to the highway center line to the extent feasible and practical. Crossings should be made on a true line and grade. Crossings entering the right of way at an angle greater than forty-five degrees from normal shall be considered longitudinal location except crossings within public road intersections.

(4) The horizontal location shall be placed with relation to the centerline of the highway as approved by the department.

(5) The vertical location of underground utility lines shall be in accordance with the currently applicable design standard for underground utility encroachments. The vertical clearance of above ground facilities shall be consistent with the clearances as provided in WAC 468-34-290.

(6) In all cases, full consideration shall be given to visual quality, sound engineering principles, and overall economic aspects.

(7) Utility installations that are needed for a highway purpose, such as for continuous highway lighting or to serve a weigh station, rest or recreational area, are to be located and designed in accordance with the requirements of this policy.

(8) The department may restrict the number of utility service connections, and require the placement of one or more distribution lines in lieu thereof.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-130, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-130, filed 12/20/78. Formerly WAC 252-04-095.]

WAC 468-34-140 Utility tunnels and bridges.

The department should ensure adequate study is made by the utility companies to anticipate their needs (present and future) for crossings and to determine if convergence of several crossings can be made to make it more feasible to use a utility tunnel or bridge.

In a combined tunnel or bridge, provision shall be made to isolate mutually hazardous transmittants such as fuels and electric energy by compartmentizing or by auxiliary encasement of incompatible carriers.

The utility tunnel or bridge shall comply in appearance, location, cover, earthwork and markers with the standards as set in the current Standard Specifications for Road, Bridge, and Municipal Construction.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-140, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-140, filed 12/20/78. Formerly WAC 252-04-105.]

WAC 468-34-150 Design.

(1) The utility company shall be responsible for the design of the utility facility. The department shall review and approve the utility's plans with respect to location and the manner in which the utility facility is to be installed and measures to be taken to preserve safe and free flow of traffic, structural integrity of the roadway or highway structure, ease of highway maintenance, appearance of the highway and the integrity of the utility facility.

(2) Utility installations on, over or under the rights of way and utility attachments to highway structures shall as a minimum comply with the following standards and/or amendments thereto:

(a) Electric power and communication facilities shall conform with the currently applicable National Electric Safety Code and/or Washington State Safety Code.

(b) Water lines shall conform with the current Standard Specifications for Road, Bridge, and Municipal Construction including but not limited to:

Welded Steel Water Pipe	AWWAC201 & ASTM A 120 AWWAC203 AWWAC205
Reinforced Concrete Water Pipe	AWWAC300 AWWAC301 AWWAC302
Cast Iron Water Pipe	AWWAC106 AWWAC108 AWWAC111
Wrought Iron Water Pipe	ASTMA72

(c) Pressure pipeline shall conform with the currently applicable sections of Standard Code for Pressure Piping of the American National Standards Institute and applicable industry codes, including:

- (i) Power Piping, ANSI B 31.10
- (ii) Petroleum Refinery Piping, ANSI B 31.3
- (iii) Liquid Petroleum Transportation Piping Systems, ANSI B 31.4
- (iv) CFR 49, Part 192, Transportation of Natural and Other Gas by Pipeline - Minimum Federal Safety Standards
- (v) Liquid petroleum pipelines shall conform with the currently applicable recommended practice of the American Petroleum Institute for Pipeline Crossings Under Railroad and Highways.

(API RP 1102)

(d) Sewer pipe shall conform with the current Standard Specifications for Road, Bridge, and Municipal Construction.

(e) Drainage pipe shall conform with the current Standard Specifications for Road, Bridge, and Municipal Construction.

(3) Ground mounted utility facilities shall be of a design compatible with the visual quality of the specific highway section being traversed.

(4) All utility installations on, over, or under highway right of way and attachment to highway structures shall be of durable material designed for long service life expectancy and relatively free from routine servicing and maintenance.

(5) On new installations or adjustment of existing utility lines, provision shall be made for known or planned expansion of the utility facilities, particularly those located underground or attached to structures. They shall be planned so as to minimize hazards and interference with highway traffic when additional overhead or underground lines are installed at some future date.

(6) Government or industry codes required by law or regulation shall be followed in addition to rules and regulations referred to herein. This shall include any highway design standards which the department shall deem necessary to provide adequate protection to the highway, its safe operation, appearance and maintenance.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-150, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-150, filed 12/20/78. Formerly WAC 252-04-115.]

WAC 468-34-160 Permits and franchises.

Except as provided in WAC 468-34-180, a permit or franchise shall be required for occupancy of highway right of way by utility facilities, including private lines.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-160, filed 12/20/78. Formerly WAC 252-04-125.]

WAC 468-34-170 Permits and franchises -- Contents.

All permits or franchises shall:

(1) Incorporate all pertinent provisions of this policy as to location, construction, traffic protection, maintenance, access restriction, preservation of visual qualities, and such special conditions as the department may deem appropriate.

(2) Generally describe the facilities to be installed as to size, type, nature and extent.

(3) Contain adequate exhibits depicting:

- (a) Existing or proposed location in relation to the highway.
- (b) Existing or planned highway improvements.
- (c) Right of way.

(d) Control of access and access points.

(4) Contain a summarization of the effects the installation will have on the aesthetics of the highway right of way and visible natural features.

(5) Specify the extent of liability and responsibilities associated with future adjustment of the utility facilities to accommodate highway improvements.

(6) Specify the effect of noncompliance with the conditions thereof.

(7) Contain terms which shall commit the holder to a pledge that performance of routine cutting and trimming work will be accomplished in such a manner that the roadside appearance will not be disfigured. When major work is involved, or damage to roadside appearance may become significant, the holder shall secure the approval of the department in advance of the work.

(8) Contain a certification of compliance with the control zone guidelines.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-170, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-170, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-170, filed 12/20/78. Formerly WAC 252-04-135.]

WAC 468-34-180 Accommodation where prior right.

Where the utility facilities are to be adjusted to accommodate highway construction and the utility has a prior property right in its location, the department and the utility may enter into a common use agreement providing for joint occupancy of right of way consistent with the requirements of each party.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-180, filed 12/20/78. Formerly WAC 252-04-145.]

WAC 468-34-190 Pipelines -- Location and alignment.

(1) For all crossings, the angle of crossing should be based on economic considerations of practical alternates. The crossings should be as near normal to the highway centerlines as practical.

(2) Pipeline crossings should avoid deep cuts, footings of bridges and retaining walls, wet or rocky terrain or locations where highway drainage would be affected.

(3) Longitudinal installations shall parallel the highway and lie as near as practicable to the highway right of way line. Any longitudinal installation in the roadway or median, as defined in WAC 468-34-110 (7) and (8), shall be considered a variance from this policy. Any request for such a variance must demonstrate that:

(a) The installation will not adversely affect the design, construction, stability, structural integrity, traffic safety or operation of the highway.

(b) The installation, other than in the roadway or median, will create an undue hardship or financial burden by reason of terrain, geology, or environmental damage along the roadside.

(4) Trenched crossing in the roadway as defined in WAC 468-34-110(7) shall be considered a variance from this policy. Any request for such a variance shall comply with subsection (3)(a) and (b) of this section.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-190, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-190, filed 12/20/78. Formerly WAC 252-04-155.]

WAC 468-34-200 Pipelines -- Cover.

(1) The grade of the top of pipe within the highway right of way shall comply with the applicable Design Standard for Underground Utility Encroachment.

(2) Where less than minimum cover is made necessary to avoid obstacles, the pipe should either be rerouted or protected with a casing or concrete slab acceptable to the department.

(3) Cover for pipelines carrying transmittants which are flammable, corrosive, expansive, energized, or unstable shall not be reduced below safety limits as specified in the appropriate industry standards and specifications.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-200, filed 12/20/78. Formerly WAC 252-04-165.]

WAC 468-34-210 Pipelines -- Encasement.

(1) Casings shall be required for the following conditions except as may be permitted under subsection (3) of this section.

(a) Pipeline crossings under completed freeways and other controlled access highways.

(b) Pipeline crossings where casing is required by appropriate industry code or special conditions.

(c) Pressurized carrier pipes and carriers of transmittants which are flammable, corrosive, expansive, energized, or unstable.

(d) Pipeline installations where local features, embankment materials, construction methods or other conditions indicate any possibility of damage to the protective coating during installation.

(2) Casings may be required for the following conditions.

(a) As an expediency in the insertion, removal, replacement or maintenance of carrier pipe crossings of freeways and other locations where it is necessary in order to avoid open trench construction.

(b) As protection for carrier pipe from external loads or shock, either during or after construction of the highway.

(c) As a means of conveying leaking fluids or gases away from the area directly beneath the traveled way to a point of venting at or near the right of way line or to a point of drainage in the highway ditch or a natural drainage way.

(d) Jacked or bored installations of coated carrier pipes, except where assurance is provided the department that there will be no damage to the protective coating.

(3) Casings may or may not be required for the following conditions.

(a) Pipelines relocated in advance of highway construction, including those conveying natural or other gas which meet the design, installation and cathodic protection provisions of the Minimum Federal Safety Standards, CFR 49, Part 192 may be constructed without encasement provided the department (and the pipeline officials) agree that the lines are and will remain structurally sound and operationally safe.

(b) Uncased crossings for local service connections of one inch diameter or less carrying natural or other gas which conform to the design, installation, and cathodic protection provisions of the Minimum Federal Safety Standards, CFR 49, Part 192 may be permitted on two-lane highways at those locations where the department agrees that the embankment materials and installation methods are adequate and that complete assurance is provided against damage to the protective coating of the pipe or to the roadway structure.

(c) Pipelines installed where open cutting is allowed.

(4) Casing pipes shall extend a minimum of six feet beyond the toe of fill slopes, or back of ditch line, or outside curb. The casing pipe need not be continuous on freeways with or without frontage roads; however, maintenance in the median shall not be required on a routine basis.

(5) Casing pipes shall be sealed at the ends.

(6) Casing pipes shall be designed to support the load of the highway and superimposed loads thereon and, as a minimum, shall equal the structural requirements for highway drainage facilities. Casings shall be composed of materials of sufficient durability to withstand any conditions to which they may be exposed.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-210, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-210, filed 12/20/78. Formerly WAC 252-04-175.]

WAC 468-34-220 Pipelines -- Appurtenances.

(1) Vents shall be required for casings, tunnels and galleries enclosing carriers of fuel where required by CFR 49, Part 192, Minimum Federal Safety Standards. Vent standpipes shall be located and constructed so as not to interfere with maintenance of the highway nor to be concealed by vegetation; preferably they should stand by a fence or on the right of way line.

(2) Drains shall be required for casings, tunnels, or galleries enclosing carriers of liquid, liquefied gas or heavy gas. Drains may outfall into the roadway ditch or natural water course at locations approved by the department. The outfall shall not be used as a wasteway for purging the carrier unless specifically authorized by the department.

(3) Marker location and emergency information shall be conspicuously marked for all pipelines, using color if necessary to contrast with the environment. They should be provided at one end of a normal crossing, at both ends of an oblique crossing and at five hundred foot intervals along a longitudinal installation. Markers shall include pipeline identification and station; owner of the pipeline; and telephone number or other means of contact with local office. Markers may also include depth of cover, size, pressure and contents of carrier, and potential of ducted wires and cables.

(4) Manholes shall not be located in the pavement or shoulders of any access controlled highway. Manholes should be designed and located in such a manner that will cause the least interference to other utilities and future highway expansion.

(5) Automatic shut-off valves shall be installed in line at or near ends of structures, near unusual hazards, unless the hazardous segments can be isolated by other sectionalizing devices within a reasonable distance.

(6) Above-ground appurtenances shall be located to comply with the control zone guidelines.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-220, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-220, filed 12/20/78. Formerly WAC 252-04-185.]

WAC 468-34-230 Pipelines -- Uncased carriers.

(1) The carrier pipe shall conform to the material and design requirements of the utility industry and government codes and specifications.

(2) The carrier pipe shall be designed to support the load of the highway plus superimposed loads thereon when the pipe is operated under all ranges of pressure from maximum internal to zero pressures.

(3) Suitable bridging, concrete slabs, or other appropriate measures as approved by the department shall be used to protect existing carrier pipes which by reason of shallow bury or location makes them vulnerable to damage from highway construction or maintenance operations.

(4) Existing carrier pipelines may remain in place without further protective measures if they are of adequate depth and do not conflict with highway construction or maintenance and provided the department (and the pipeline officials) agree that the lines are, and will remain, structurally sound and operationally safe.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-230, filed 12/20/78. Formerly WAC 252-04-195.]

WAC 468-34-240 Pipelines -- Restrictions against varied use.

(1) Pipeline installation requests shall specify the class of transmittant, the maximum working, test, or design pressures, and the design standards for the carrier.

(2) A change in the class of transmittant, or an increase in the maximum design pressure specified in the permit or franchise, shall require approval of the department. The request for the change shall specify the applicable codes to be used.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-240, filed 12/20/78. Formerly WAC 252-04-205.]

WAC 468-34-250 Pipelines -- Installation.

Installation or replacement of pipelines along or crossing highways shall ordinarily be controlled by end-product specifications. However, to insure safety of traffic and preservation of the earth structure supporting the pavement, any required construction shall be in accordance with the following controls:

(1) Trenched construction and backfill. The essential features for trench and backfill construction are:

(a) Restoration of the structural integrity of entrenched roadbed.

(b) Security of the pipe against deformation likely to cause leakage.

(c) Assurance against the trench becoming a drainage channel or against drainage being blocked by the backfill.

(2) Trenched construction - bedding and backfill.

(a) Trenches shall be cut to have vertical faces, where soil and depth conditions permit, with a maximum width of outside diameter of pipe plus two feet. Shoring shall comply with the department of labor and industries safety code for construction and/or as directed by the department.

(b) Bedding shall be provided to a depth of six inches or half the diameter of the pipe, whichever is least. Bedding should consist of granular material free of lumps, clods, stones, and frozen material. Bedding shall be graded to a firm but yielding surface without abrupt change in bearing value. Unstable soils and rock ledges should be subexcavated from the bedding zone and replaced with suitable material or as directed by the department. The bottom of the trench should be prepared to provide the pipe with uniform bedding throughout the length of the installation.

(c) Backfill shall be placed in two stages:

(i) Sidefill to the level of top of pipe.

(ii) Overfill to former grade surface. Sidefill and overfill shall consist of granular material laid in six-inch layers, each consolidated by mechanical tamping and controlled addition of moisture, to a density of ninety-five percent in accordance with the current Standard Specifications for Road, Bridge, and Municipal Construction. Consolidation by saturation or ponding is not permitted.

Backfilling and methods of compaction should be adapted to achieve prompt restoration of traffic. Additional cutback of base and surfacing and transitioning of trench shoulders to minimize later development of sag in the grade of the pavement over the trench shall be as directed by the department.

(3) Untrenched construction shall be required on all pipeline crossings of limited access highways and:

(a) The width of untrenched construction shall extend a minimum of six feet outside the roadway prism.

(b) Pipelines installed under a highway without disturbing the surface shall be made using a technique approved by the department.

(c) The size of the opening shall not exceed five percent oversize in diameter. Backfill is required for pipes over twelve inches in diameter.

(d) Overbreaks, unused holes, or abandoned casings shall be backfilled as directed by the department.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-250, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151.

79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-250, filed 12/20/78. Formerly WAC 252-04-215.]

WAC 468-34-260 Pipelines -- Adjustment.

(1) An existing pipeline should be relocated in plan and/or grade whenever the top of the pipe is less than the requirements of the currently applicable standard design plate for underground utility encroachments.

(2) An existing or relocated pipeline shall be encased or otherwise protected wherever such treatment normally would be required for a future pipeline at the site.

(3) An existing pipeline which would lack adequate cover for protection against vehicular live loads or highway construction operations may, in lieu of encasement, be protected by a floating slab.

(4) Notwithstanding reinforcement or protection otherwise provided, the highway construction contractor should be warned and made responsible for the security of each existing pipeline within the construction zone. Where there are unusual utility hazards and where heavy construction equipment will be needed, it should be arranged that the contractor provide an adequate temporary protective cover of earth or bridge the utility if underground.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-260, filed 12/20/78. Formerly WAC 252-04-225.]

WAC 468-34-270 Installations on highway structures.

Attachment of utility lines to a highway structure may be allowed where such attachment shall conform to sound engineering considerations for preserving the highway, its safe operation, maintenance and appearance. The attachment shall be in accordance with the following:

(1) Each proposed bridge attachment should be considered on its individual merits and separately designed so as to be compatible with the appearance of the structure.

(2) Bridge attachment of a utility should not be considered unless the structure in question is of a design that is adequate to support the additional load and to accommodate the utility facility without compromise of highway features, including reasonable ease of bridge maintenance.

(3) Utility positionings on a structure which would inhibit access to any structure part for bridge painting, repair or maintenance should not be allowed. Manholes for utility access shall not be allowed in the bridge deck on overcrossings.

(4) Attachment on a structure of a pipeline carrying a hazardous transmittant shall be avoided where practical.

(5) The utility attachment shall not effectively reduce the clearance of the structure where such clearance is critical.

(6) Generally, utility attachments should be beneath the structure's floor, between the girders or beams or within a cell and at an elevation above low superstructure steel or masonry. Attachment to the outside of the bridges should be avoided where there are reasonable alternatives.

(7) Utility mountings should be of a type which will not create noise resulting from vibration.

(8) The hole created in the bridge abutment shall be of the minimum size necessary to accommodate the utility line. The hole shall be sealed to prevent any leakage of water or backfill material.

(9) The utility line back of the bridge abutment should curve or angle out to align outside the roadbed area in as short a distance as is operationally practicable.

(10) Acceptable utility attachment methods are hangers and/or roller assemblies suspended from inserts in the underside of the bridge floor or from hanger rods clamped to the flange of some substructure member or as otherwise specified by the department.

(11) Utility construction shall conform to applicable codes, standards and specifications.

(12) The utility company shall be responsible for any restoration or repair of any portion of bridge or highway disturbed by the utility installation or use.

(13) Communication and electric power line attachments shall be suitably insulated, grounded, and carried in protective conduit or pipe from point of exit from ground to reentry. The cable shall be carried to a manhole located beyond the backwall of the structure. Carrier pipe and casing pipe shall be suitably insulated from electric power line attachments.

(14) WAC 468-34-210 shall apply to installations on structures.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-270, filed 12/20/78. Formerly WAC 252-04-235.]

WAC 468-34-280 Overhead power and communication lines -- Type of construction.

Longitudinal installations on the right of way should be single pole construction. Joint use single pole construction is generally desirable and should be used whenever feasible.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-280, filed 12/20/78. Formerly WAC 252-04-245.]

WAC 468-34-290 Vertical clearance.

The vertical clearance for overhead power and communication lines above the highway and the lateral and vertical clearance from bridges shall conform with the National Electrical Safety Code and/or with the clearances as shown below, whichever is greater.

TYPE OF UTILITY LINE	LINES	
	CROSSING ROADWAYS	LONGI-TUDINAL
Communications and Cable Television	24'	20'
Communications and/or Cable Television joint usage with electrical	20'	20'
ELECTRICAL		
0 - 750 volts	24'	24'
751 - 15,000 volts	30'	27'
15,001 - 50,000 volts	32'	32'
50,001 volts & over	34'	32'

(1) The minimum height of highway crossing shall be measured from the point of the roadway directly under the crossing.

(2) The minimum height of longitudinal lines shall be measured from ground line.

(3) All clearances shall be at State Electrical Construction Code temperature and loading standards, and comply with all other requirements of this code.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-290, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-290, filed 12/20/78. Formerly WAC 252-04-255.]

WAC 468-34-300 Overhead lines -- Location.

(1) Pole lines must be located in accordance with the control zone guidelines.

(2) Guy wires to ground anchors and stub poles shall be located in accordance with the control zone guidelines.

(3) Where irregular shaped portions of the right of way extend beyond the normal right of way limits, variances in the location from the right of way line should be allowed as necessary to maintain a reasonably uniform alignment for longitudinal overhead and underground installations.

(4) On and along conventional highways, poles and related facilities should be located as near as practicable to the right of way line.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-300, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-300, filed 12/20/78. Formerly WAC 252-04-265.]

WAC 468-34-310 Underground power and communication lines.

(1) The general controls relative to pipelines shall apply to underground installation of power and communication lines.

(2) The general controls set forth in WAC 468-34-270 relative to installations on highway structures shall be followed.

(3) The design of underground installations should reflect consideration of possible future highway and/or utility enlargement.

(4) Manholes shall be designed and located in such a manner that will cause the least interference to other utilities and future highway expansion.

(5) New underground utility installations may be permitted in scenic strips, overlooks, where they will not require extensive removal or alteration of trees visible to the highway user or impair the visual quality of the lands being traversed.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-310, filed 12/20/78. Formerly WAC 252-04-275.]

WAC 468-34-320 Conversion to underground or relocation of overhead lines -- Responsibility.

Consistent with existing statutes and the necessity for protecting roadside appearance and removal or relocation of existing aerial lines within certain areas, the following methods of sharing cost responsibility shall pertain under various circumstances.

(1) Where an aerial utility line exists under franchise and for reasons of visual quality the department desires undergrounding or aerial relocation during the life of the franchise to serve the highway purpose, the department will pay the cost of the new facility, plus cost of removal of the old plant, less a credit for depreciation and salvage on the replaced plant.

(2) For new franchises for new utility lines where none presently exist and where the department determines on the basis of scenic classification (WAC 468-34-330) that the facilities shall be placed underground, the entire cost shall be borne by the utility.

Where a franchise is to be amended or has been renewed for the first time after the effective date (August 20, 1974) of this policy revision and the department determines on the basis of scenic classification (WAC 468-34-330) that the facility should be placed underground or relocated aerially, the cost for such undergrounding or relocation shall be borne by the utility. Such undergrounding or relocation shall occur at the time of reconstruction of the line by the utility or at a time determined by the utility within the renewal period, whichever occurs first.

(3) Within the limits of projects for highway construction where the utility occupies the right of way by right of franchise and where

the department determines on the basis of scenic classification (WAC 468-34-330) that the facility should be placed underground or, based on design and/or location considerations the facility may be relocated aerially, the cost responsibilities shall be determined as follows:

(a) The utility shall be responsible for the full cost of that portion of the existing aerial facility that must be relocated within the physical limits of construction.

(b) The department will pay the cost of the new facility, plus the cost of removal of the old plant less a credit for depreciation and salvage on the replaced plant, for that portion of aerial line not physically affected by the highway construction.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-320, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-320, filed 12/20/78. Formerly WAC 252-04-280.]

WAC 468-34-330 Scenic enhancement.

(1) Undergrounding requirements within scenic areas: In the interest of protection and preservation of roadside appearance and visual quality of scenic areas, the following requirements shall pertain to highway sections classified in accordance with the definitions set forth in subsection (3) of this section.

Class A and B:

Initial franchises and franchise amendments where aerial facilities are nonexistent: Installation shall be underground except as may be justified as special exceptions listed in subsection (2) of this section.

Initial franchises and franchise amendments where aerial facilities exist: An aerial facility may be allowed on existing poles with the franchise to expire on the date of the existing franchise for the aerial line. No major reconstruction of the existing pole line or construction of a new aerial facility will be allowed except as may be justified under subsection (2) of this section.

Franchise renewals of existing aerial facilities: Upon expiration of an existing franchise, one franchise renewal for a period of twenty-five years may be granted for existing aerial lines with a special provision included in the franchise requiring the utility to apply for an initial franchise, franchise amendment or franchise renewal for burial of the facility either at the time major reconstruction of the line, for that portion of line to be reconstructed, or prior to expiration of the first franchise renewal. Existing facilities may be allowed to remain aerial if justified under subsection (2) of this section.

In considering approval of aerial facilities as special exceptions under subsection (2) of this section, greater emphasis upon the justification of facilities within Class A route segments shall be given by the department as compared to those in Class B.

Class C and D:

Aerial installations within highway sections having Class C and D scenic classification are permitted.

Class AX and BX:

An aerial facility may be allowed if found acceptable to the department based on design and/or location which will not detract from scenic values typical of those defined in Classes A and B.

(2) Special exceptions: Special exceptions may be made where one or more of the following conditions exist:

Power lines of voltage in excess of 35 KV. Special design should be incorporated to minimize the visual impact of the facility.

Other utility locations are not available or are usually difficult and unreasonably costly, or are more undesirable from the standpoint of visual quality.

The placing of the utility underground is not technically feasible or is unreasonably costly.

The impact of the required undergrounding adversely affects the utility consumer rates or the long term economics of the utility.

(3) Classifications:

Class A -- Superior scenic qualities: Unique settings of superior scenic quality, historic or cultural, interest that should be protected or preserved by special treatment for heritage of others. Panoramic views from the highway of ocean beaches, scenic valleys, lake frontage, mountain forests, rivers, etc.

Class B -- High scenic value: Areas where valuable scenic and environmental amenities exist and are enjoyed generally by travelers and public and deserve serious consideration for preservation and protective measures.

Class C -- Secondary scenic importance: Scenic characteristics are of marginal importance.

Class D -- Industrial, heavily urbanized or deteriorated areas: Industrial areas, urban settings and blighted areas which expense for beautification measures is not appropriate.

Subclass X -- Alternative for Class A and B: Areas where based on design alternatives, such as configurations, color and location, an aerial facility could be allowed without changing the landscape quality.

General criteria: Classifications are to be based on the scenic values of the view from the roadway including the roadway appearance attainable after ultimate improvements within the right of way. Sections are to be of sufficient length to sustain separate distinguishable area characteristics.

[Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-330, filed 12/20/78. Formerly WAC 252-04-285.]

WAC 468-34-340 Miscellaneous.

(1) Preservation, restoration and cleanup

(a) Disturbed areas - The size of the disturbed area shall be kept to a minimum. Restoration methods shall be in accordance with the specifications and/or special provisions of the permit or franchise. Unsatisfactory restoration work shall be promptly redone by the utility. If necessary, restoration work that is not acceptable to the department, may be repaired by the department and billed to the utility company.

(b) Drainage - Care shall be taken in utility installations to avoid disturbing existing drainage facilities. Underground utility facilities should be backfilled with pervious material and outlets provided for entrapped water. Underdrains should be provided where necessary. No jetting or puddling shall be permitted under the roadway.

(c) Spraying, cutting and trimming of trees - The indiscriminate cutting of trees or disfiguring of any feature of scenic value shall not be permitted. The utility shall repair or replace in kind any tree or shrub removed or disfigured when such is not necessary for the utility installation.

(d) If chemical sprays are used to kill weeds and brush, they shall comply with currently applicable federal and state department of agriculture regulations and the following:

(i) A special permit issued by the department shall be required.

(ii) Brush and trees thirty inches or higher shall be close cut and treated with spray to kill the roots and stumps.

(iii) Brush shall be disposed of by chipping or removal from the right of way.

(iv) Brush and weeds thirty inches or less in height may be treated with a chemical spray. After the brush and weeds have died, they shall be immediately removed to prevent a serious fire hazard.

(v) The utility shall be responsible for any drift of the spray that contacts vegetation on private property adjacent to the highway.

(vi) Ingredients that are toxic to livestock, game animals or fowls shall not be used.

(e) Refuse and debris shall be disposed of to the satisfaction of the department.

(2) Safety and convenience

(a) Traffic controls including detours for utility construction and maintenance shall conform with currently applicable "Manual on Uniform Traffic Control Devices for Streets and Highways." All construction and maintenance operations shall be planned to keep interference with traffic to an absolute minimum. On heavily traveled highways construction operations interfering with traffic shall not be allowed during periods of peak traffic flow. Work shall be planned so that closure of intersecting streets, road approaches or other access points is held to a minimum. Adequate provisions shall be made to safeguard any open excavation to include barricades, lights, flagmen, or other protective devices as may be necessary.

(b) All utility facilities shall be kept in good state of repair both structurally and from the standpoint of appearance. The permit or franchise shall specify the maintenance operations which are permitted and the required notification to the department before any work is accomplished. Vehicle parking and the storage of materials on through roadways or ramps shall not be allowed.

(c) If emergency repairs are required, such repairs shall be undertaken and notice given immediately and approval as to the manner of repair secured as soon as possible. The utility shall confine its operations as much as possible to the nontraveled portion of the right of way and shall exercise caution to protect the traveling public during such repairs. Flagmen, warning lights, barricades, and signs shall be employed in accordance with currently applicable Manual on Uniform Traffic Control Devices for Streets and Highways, and Manual for Emergency Traffic Control for Protection of Men and Equipment.

(d) Installations included in the Category 4 exemption require twenty-four hours notice to the department prior to construction. Vehicle parking and the storage of materials on through roadways or ramps shall not be permitted. Flagmen, warning lights, barricades, and signs shall be employed in accordance with currently applicable Manual on Uniform Traffic Control Devices for Streets and Highways, and Manual for Emergency Traffic Control for Protection of Men and Equipment.

[Statutory Authority: Chapter 47.44 RCW. 95-21-037 (Order 152), § 468-34-340, filed 10/10/95, effective 11/10/95; 89-05-022 (Order 119), § 468-34-340, filed 2/10/89. Statutory Authority: 1977 ex.s. c 151. 79-01-033 (DOT Order 10 and Comm. Order 1, Resolution No. 13), § 468-34-340, filed 12/20/78. Formerly WAC 252-04-295.]

WAC 468-34-350 Control zone guidelines.

Consistent with federal, state, or local laws or regulations all utility installations within the highway right of way shall be located in accordance with the control zone guidelines. The control zone guidelines govern the location of utilities within the right of way for the following:

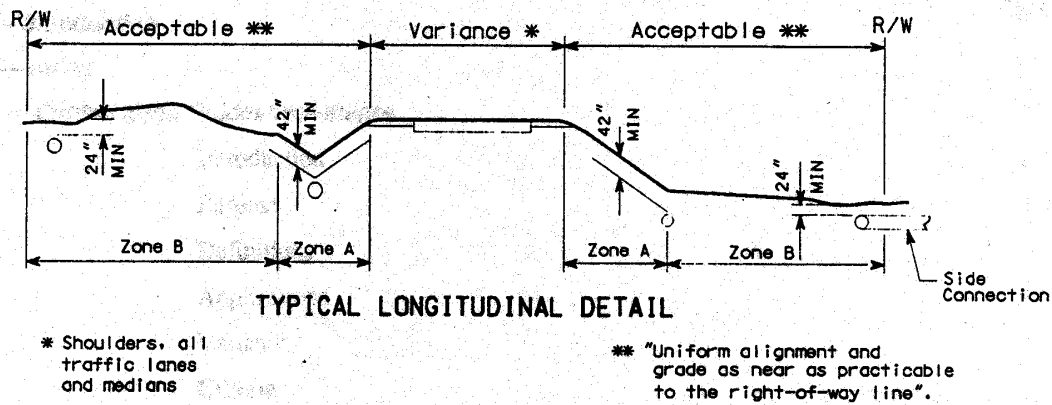
(1) New installations or reconstruction.

(2) Highway projects involving safety improvements.

(3) Franchise renewal or consolidation of existing utility objects.

[Statutory Authority: Chapter 47.44 RCW. 89-05-022 (Order 119), § 468-34-350, filed 2/10/89.]

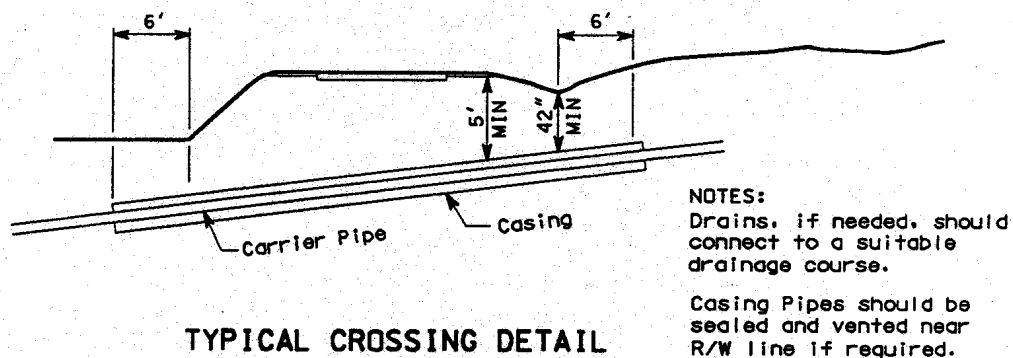
Requirements Involving Underground Utility Enchroachments



Utility facilities shall be buried in accordance with the Provisions for Permits and Franchises.

Zone A is the area within the foreslope and backslope where routine maintenance operations generally occur. This area is defined as five feet beyond the bottom of the ditch or 15 feet beyond edge of shoulder, whichever is further.

Zone B is the area outside of the roadway and Zone A.



Contents	Page
I- Introduction	2
II – Rules	2
III – Control Zone Guidelines- Utilities	2
Introduction	3
Purpose	3
Definitions	3
Applications	5
Variance	7
Criteria	8
Control Zone Distance Table	9
Examples- Use of Control Zone Table and Criteria	11
Supplement Information- Utility Design Considerations	13
Attachment A- Process to Determine if a Location 2 Object is Cost Effective to Relocate	16

I. Introduction

A. Purpose

To provide guidance pertaining to procedures to be used to process requests for utility occupancy of Washington State Department of Transportation (WSDOT) rights of way.

II. Rules

- A. Utility facilities are to be accommodated in accordance with the guidelines in Part III, below.
- B. It is not WSDOT's intent to force utilities off the rights of way, therefore, it is critical for headquarters and districts to work cooperatively with the utilities in implementing these guidelines. It will be necessary for the districts to help the utilities understand WSDOT terminology, traffic data, and sideslope calculations.
- C. It will be necessary for the districts to work closely with the utilities in the following ways:

Assisting the utilities in determining how their new construction or reconstruction facility can be outside the control zone, covered by a variance or designated as Location III Objects.

1. Assisting the utilities on highway projects to ensure they are not adjusting their facility beyond the scope of the highway work.

- 1. Assisting the utilities with franchise renewals or consolidations and ensuring that they are adjusting or protecting those facilities where corrective action is necessary.

- D. It is expected that a utility company that has a franchise(s) expiring prior to January 1, 1993, as indicated in the previous guidelines, would have budgeted resources to accomplish the work necessary to comply with the guidelines. Therefore, those utilities should be able to begin work in accordance with their mitigation plan on the date they were scheduled to start under the franchise renewal trigger method.

Beginning January 1, 1992, the remaining utility companies will begin the mitigation of Location I and II objects in accordance with their plan.

III. Control Zone Guidelines--Utilities

Introduction

It has been recognized that it is in the public interest for utility facilities to jointly use the right of way of public roads and streets when such use and occupancy does not interfere with the primary purpose of the highway. As a result, the highway's right of way can be used to transmit and distribute utility services for the benefit of the public as well as to serve conventional highway needs.

WSDOT is charged with overall supervision and administration of the state's highway system. This includes planning, operation, design, construction, economics, safety, and accommodation of utility facilities on state public highway right of way. Guidelines which govern where utilities may be placed within the public right of way must be developed.

These guidelines will be reviewed with the utility industry every two years for workability and updated as the need arises.

Purpose

It is WSDOT's policy to accommodate utilities within the highway right of way when such use of the right of way is consistent with the provisions of federal, state, or local laws or regulations.

These guidelines are developed to provide direction as to when and how utilities may use WSDOT's public highway right of way. It is not the intention of these guidelines to force utilities to relocate outside the state highway right of way. Safety improvements accomplished as a result of these guidelines will help maintain highway safety in the future.

Utility services are in the public's interest and every effort should be made to accommodate utilities, as cost-effectively as possible, while maintaining public safety.

These guidelines are in accordance with the American Association of State Highway and Transportation Officials (AASHTO), National Research Council, the Federal Highway Administration (FHWA), and WSDOT philosophies.

Definitions

Alternative Countermeasures

Alternatives to the relocation of nontraversable utility objects to outside the Control Zone, including:

- Putting utility lines underground
- Increasing the lateral offset of utility objects from the edge of the traveled way.
- Locating to an inaccessible area, such as toward the top of on top of cut slopes.
- Reducing the number of utility objects through joint use, increased span lengths and /or placing utility objects on only one side of the road.
- Installing protective devices, such as berms, guardrail, traffic barriers or impact attenuators.
- Using a breakaway design.

Annual Mitigation Target

The number of a utility's existing Control Zone objects to be relocated or mitigated in a given year, to be established by WSDOT and the utility based on the following formula:

$$\frac{[(M \times 5,280 \text{ feet}) / N\text{feet}] \times (Z\%)}{Y}$$

- Where:
- M= The number of miles of utility owned above ground facilities located within highway right of way.
 - N= The utility's average line span length.
 - Z= Percent of the object's owned by utility that are estimated to be in Location I and II.
 - Y= Number of years, 50 maximum, for compliance with the guidelines.

A utility shall make every effort to achieve its Annual Mitigation Target (AMT). If a utility does not achieve its AMT in a particular year, the number of objects that are to be relocated or mitigated in the following year shall be increased so that the average number of objects that are relocated or mitigated over time equals its AMT.

If a utility exceeds its AMT in a particular year, the utility may reduce the number of objects that are to be relocated or mitigated in the following year so that the average number of objects that are relocated or mitigated over time equals its AMT.

The utility will report the number of objects that relocated or mitigated to WSDOT for the purpose of tracking the utility's progress in meeting its AMT.

The AMT may be recalculated if the utility can demonstrate that there are fewer objects to be moved or mitigated because of Location II objects being reclassified and/or conditions change.

Auxiliary Lane

An auxiliary lane is that portion of the roadway adjoining the traveled way for parking, speed change, turning, storage for turning, weaving, truck climbing, or for other purposes supplementary to the traveled way.

Control Zone

That roadside area as defined by the "Control Zone Distance Table" within the highway right of way in which placement of utility objects is controlled.

Cost-Effectiveness Selection Procedure

A rational methodology developed by AASHTO for comparing roadside improvement alternatives. AASHTO's methodology, published as Appendix A to its

1989 Roadside Design Guide, can be used manually or through a computer program that is available. It allows its user to predict the total costs associated with specific traffic and roadway conditions and to select the most appropriate alternative. See Attachment A.

Location I Objects

Utility objects located within the Control Zone in the following areas are normally considered Location I Objects unless classified as a Location III Object:

- Outside of horizontal curves where advisory signed speeds for the curve are 15 or more MPH below the posted speed limit of that section of highway. The Control Zone distance is established using the posted speed limit of the highway, not the advisory speed limit.
- Within the turn radius area of public grade intersections. See item 2, “Supplemental Information Utility Design Consideration.”
- Where a barrier, embankment, rock outcropping, ditch or other roadside feature is likely to direct a vehicle into a utility object.
- Closer than five feet horizontal beyond the edge of the usable shoulder.

Location II Objects

All utility objects located within the Control Zone that are not classified as Location I or Location III Objects.

Location III Objects

Utility objects located outside the Control Zone, objects within the Control Zone that are mitigated by an Alternate Countermeasure, or Location II objects that have been classified as Location III Objects. See Attachment A.

Slope: Back

The slope extending from the bottom of a ditch away from the highway.

Slope: Fore

The slope extending from the highway shoulder into the ditch.

Traveled Way

That portion of the roadway intended for the movement of vehicles, exclusive of shoulders, auxiliary lanes, and detour routes.

Usable Shoulder

That portion of the roadway extending beyond the edge of the traveled way, or auxiliary lanes when provided, that can be used when a driver makes an emergency or parking stop. The usable shoulder is the average width being used as a shoulder along a section of highway, exclusive of intermittent widened areas but not to exceed ten feet in width.

Utility Object

Utility objects are defined for the purpose of these guidelines as utility facilities that exist above ground and are located within state highway right of way.

Utility Reconstruction

Where more than 50 percent of the poles or towers within any mile are replaced.
Does not include periodic pole or tower replacement.

Application

Under the Control Zone Guidelines, all new utility objects will be constructed outside the Control Zone unless they are covered by a variance (discussed below) or are Location III Objects. In addition, utilities will be responsible for the systematic treatment of existing utility objects that are located in the Control Zone.

Each utility will be required to relocate or mitigate a certain number of existing objects each year equal to its AMT.

A utility can meet its AMT by addressing existing objects during WSDOT highway projects, Utility Reconstruction, and through a program of systematic studies of its objects.

1. **Utility Reconstruction**

During Utility Reconstruction the utility will relocate all utility objects to outside the Control Zone unless they are classified as Location III Objects or a variance is granted.

2. **State Highway Improvement Projects**

During the planning phase of state highway improvement projects, WSDOT will inform the utility that they may have to or must adjust utility objects that, either prior to or as the result of the project, are located in the Control Zone.

- a. For projects where the state does not address safety items, and the utility is currently meeting its AMT, the utility has the option to either adjust the utility object before or during the project or in accordance with its systematic studies.
- b. For projects where the state addresses safety item(s), the utility shall adjust Location I Objects and may be required to adjust Location II Objects to qualify as Location III Objects. Objects requiring relocation to Location III Objects in order for the project to be completed (e.g., because the highway is to be widened), should be adjusted before or during the project.

If it is determined, through an engineering analysis, that a Location I Object cannot be moved to Location III or mitigated, a variance may be granted.

Through an engineering analysis and the “Cost Effective Selection Procedure” it will be determined whether a Location II Object will be moved to Location III, or mitigated or reclassified.

WSDOT will notify the utilities of upcoming highway improvement projects as early as possible. As the project is planned, the utility will be advised of the tentative scheduled project advertising date and of those utility objects requiring relocation. When available, a copy of the Roadside Clear Zone Inventory sheet will be provided.

The number of adjusted utility objects counted toward the AMT will be determined by counting the number of Location I and II Objects that are relocated or mitigated.

3. Systematic Studies

To meet that portion of the Annual Mitigation Target that will not be addressed through highway improvements or utility reconstruction, each utility will establish a program for systematically studying its Control Zone objects. Under this program, the utility will establish a yearly plan for achieving the balance of the Annual Mitigation Target. In addition to trying to schedule object mitigation or relocation to coincide with regular utility system improvements and highway improvements, the utility shall give special consideration to one or more of the following factors to accomplish a systematic approach in the overall best public interest:

a. ADT

WSDOT will furnish data to the utility regarding ADT on the roads in its service area. Starting with the roads with highest ADT, the utility will organize its Location I and II Objects along those roads into groups that can be addressed as part of the utility’s program to meet its Annual Mitigation Target.

b. Accident Data

WSDOT will provide the utility with all of its data about accidents involving the utility’s objects. The utility will include those objects in its yearly schedules for achieving the AMT.

By giving this information to the utility, WSDOT will not be advising the utility of a hazardous condition, nor will it be requiring action on the part of the utility. The information will be provided to assist the utility in its study of Control Zone objects.

Variance

WSDOT recognizes that conditions may arise which make it impractical to comply with the maximum Control Zone. Variances from such compliance may be allowed when justified by suitable utility engineering studies considering traffic safety.

Examples of conditions rendering compliance impractical include:

- WSDOT right of way that is not adequate to accommodate utility objects outside the Control Zone; and
- Segments of utility facilities that, due to terrain or other features, do not warrant being located in full compliance with the maximum Control Zone.

In these situations, a variance, if adequately supported, may be granted by WSDOT to allow utility objects to remain or to be installed within the Control Zone.

Any variance request must include, as a minimum, the following support data:

- Reason object should not be located as Location III.
- Evidence that installation in an alternate location outside the Control Zone or right of way is extremely difficult because of installation problems and/or is unreasonably costly (show detailed cost comparison). Describe alternatives that were considered.
- Pictures and typical cross sections. Cross-section to include location of proposed and existing utility objects with reference to the edge of the traveled way.
- Address use of the Alternate Countermeasures.

Criteria

The Control Zone distance varies according to the posted speed, traffic volumes, and side slopes of the highway. This Control Zone distance is measured in feet normal to the highway, beginning at the edge of the traveled way and extending outward perpendicular to the traveled way.

The Control Zone distance can be determined using the Control Zone Distance Table and the following criteria:

1. Cut Sections with no ditch and fill sections.

The Control Zone distance is read directly from the table based on posted speed, average daily traffic (ADT), and slope.

The “Recovery Area” formula, in lieu of the table, is used ONLY when the fill section slope is 3:1 or steeper. If the fill height is also greater than 10 feet, consult the Guidelines for Embankment Barrier Chart. If embankment barrier is not recommended, the Control Zone is the Shoulder Width plus the Horizontal Distance.

2. Ditch Sections with fore slopes 4:1 or flatter.

The Control Zone distance is the greater of:

- a. The Control Zone distance for a 10:1 cut section based on speed and ADT, or

- b. Five feet horizontal beyond the beginning of the back slope.
- 3. Ditch Sections with fore slopes 3:1 or steeper, and back slopes steeper than 3:1.

The Control Zone distance is established at 10 feet horizontal beyond the beginning of the back slope.

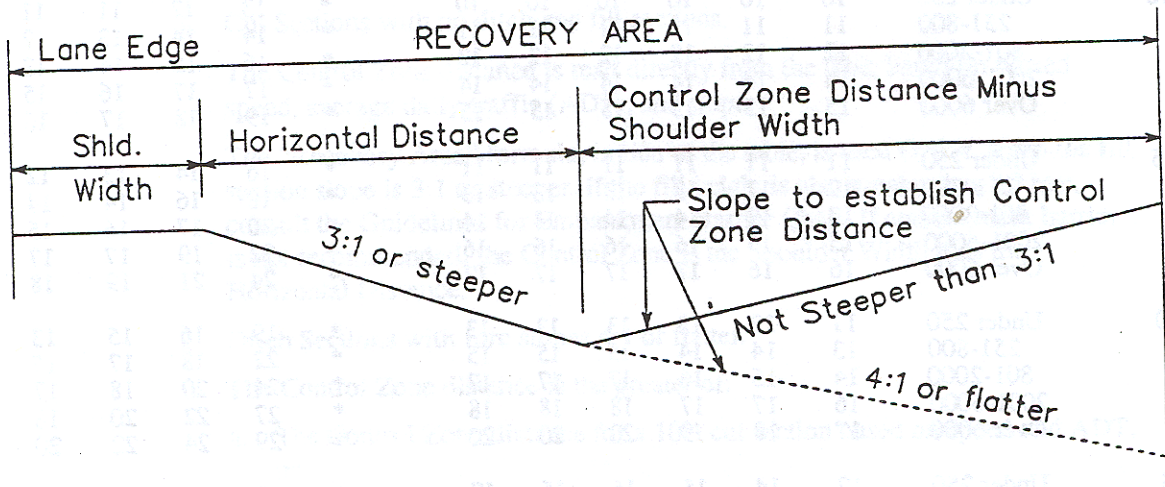
- 4. Ditch sections with fore slopes 3:1 or steeper, and back slopes not steeper than 3:1. The Control Zone distance is the distance established using the recovery area formula.
- 5. Auxiliary Lanes.

The Control Zone is either the distance from the traveled way obtained from the table based on posted speed, ADT, and slope, or ten feet from the edge of the auxiliary lane, whichever is furthest. Where curb exists, the Control Zone is two feet beyond the face of curb speed zones of 35 mph or less.

Control Zone Distance Table

Posted Speed MPH	Average Daily Traffic	Cut Section (+Slope)						Fill Section (- Slope)					
		3:1	4:1	5:1	6:1	8:1	10:1	3:1	4:1	5:1	6:1	8:1	10:1
35 or Less	The Control Zone distance is established at 10 feet or 2 feet beyond face of curb in urban areas.												
40	Under 250	10	10	10	10	10	10	*	13	12	11	11	10
	251-800	11	11	11	11	11	11	*	14	14	13	12	11
	801-2000	12	12	12	12	12	12	*	16	15	14	13	12
	2001-6000	14	14	14	14	14	14	*	17	17	16	15	14
	Over 6000	15	15	15	15	15	15	*	19	18	17	16	15
45	Under 250	11	11	11	11	11	11	*	16	14	13	12	11
	251-800	12	12	13	13	13	13	*	18	16	14	14	13
	801-2000	13	13	14	14	14	14	*	20	17	16	15	14
	2001-6000	15	15	16	16	16	16	*	22	19	17	17	16
	Over 6000	16	16	17	17	17	17	*	24	21	19	18	17
50	Under 250	11	12	13	13	13	13	*	19	16	15	13	13
	251-800	13	14	14	15	15	15	*	22	18	17	15	15
	801-2000	14	15	16	17	17	17	*	24	20	18	17	17
	2001-6000	16	17	17	18	18	18	*	27	22	20	18	18
	Over 6000	17	18	19	20	20	20	*	29	24	22	20	20
55	Under 250	12	14	15	16	16	17	*	25	21	19	17	17
	251-800	14	16	17	18	18	19	*	28	23	21	20	19
	801-2000	15	17	19	20	20	21	*	31	26	23	22	21
	2001-6000	17	19	21	22	22	23	*	34	29	26	24	23
	Over 6000	18	21	23	24	24	25	*	37	31	28	26	25
60	Under 250	13	16	17	18	19	19	*	30	25	23	21	20
	251-800	15	18	20	20	21	22	*	34	28	26	23	23
	801-2000	17	20	22	22	23	24	*	37	31	28	26	25
	2001-6000	18	22	24	25	26	27	*	41	34	31	29	28
	Over 6000	20	24	26	27	28	29	*	45	37	34	31	30
70	Under 250	16	19	21	21	23	23	*	36	29	27	25	24
	251-800	18	22	23	24	26	26	*	41	33	31	28	27
	801-2000	20	24	26	27	28	29	*	45	37	34	31	30
	2001-6000	22	27	29	29	31	32	*	50	40	38	34	33
	Over 6000	24	29	31	32	34	35	*	54	44	41	37	36

*When the Fill Section slope is 3:1 or steeper, the Control Zone distance is called a recovery area and is calculated using the Recovery Area formula. The basic philosophy behind the Recovery Area formula is that a vehicle can transverse a 3:1 slope but cannot recover (control steering) and therefore, the formula does not allow a credit toward the recovery area for the horizontal distance. The following diagram is intended to clarify the use of the Recovery Area formula.



$$\text{RECOVERY AREA} = (\text{shoulder width}) + (\text{horizontal distance}) + (\text{control zone distance} - \text{shoulder width})$$

EXAMPLES

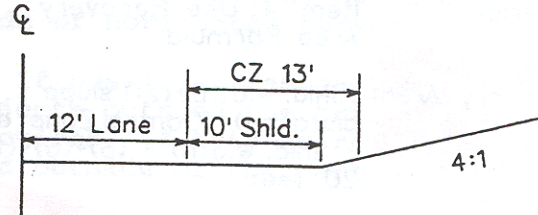
USE OF CONTROL ZONE TABLE AND CRITERIA

1. CUT SECTION - NO DITCH

Conditions: Speed 45 MPH
Traffic 1900 ADT
Slope 4:1

Criteria: Item 1, Read directly from Table

Control zone: 13 feet

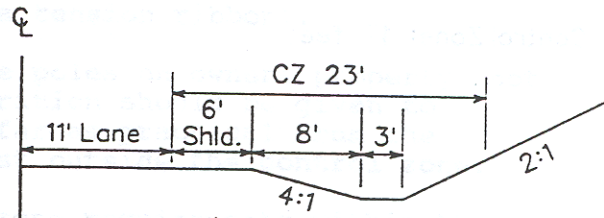


2. CUT SECTION WITH DITCH (fore slope 4:1 or flatter)

Conditions: Speed 55 MPH
Traffic 4200 ADT
Fore Slope 4:1

Criteria: Item 2, Greater of
(1) CZ 10:1 Cut Section, 23 feet
(2) 5' Horz. beyond begin. of back slope, 22 feet

Control Zone: 23 feet

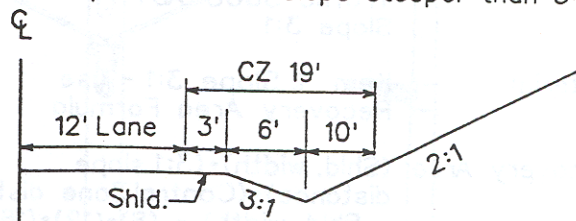


3. CUT SECTION WITH DITCH (fore slope 3:1 or steeper and back slope steeper than 3:1)

Conditions: N/A

Criteria: Item 3, CZ 10' beyond begin. of back slope

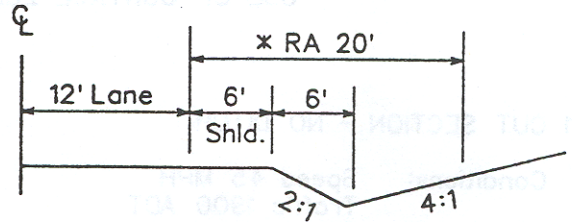
Control Zone: 19 feet



4. CUT SECTION WITH DITCH (fore slope 3:1 or steeper, and back slope not steeper than 3:1)

Conditions: Speed 40 MPH
Traffic 3000 ADT
Fore Slope 2:1
Back Slope 4:1

Criteria: Item 4, Use Recovery Area Formula



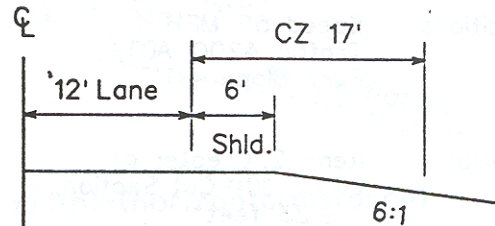
* Recovery Area: (Shld. width) + (2:1 slope distance) + (Control Zone distance - Shld. width) = (6) + (6) + (14 - 6) = 20 feet

5. FILL SECTION

Conditions: Speed 50 MPH
Traffic 320 ADT
Slope 6:1

Criteria: Item 1, Read directly from Table

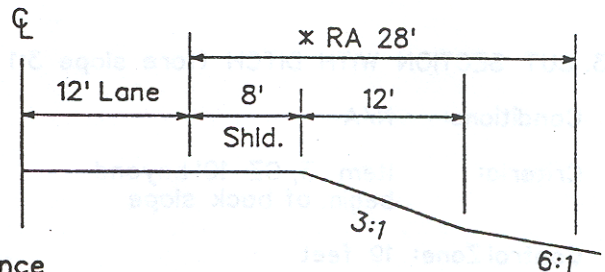
Control Zone: 17 feet



6. FILL SECTION (slope 3:1 or steeper)

Conditions: Speed 40 MPH
Traffic 3000 ADT
Slope 3:1

Criteria: Item 1, Slope 3:1 - use Recovery Area Formula



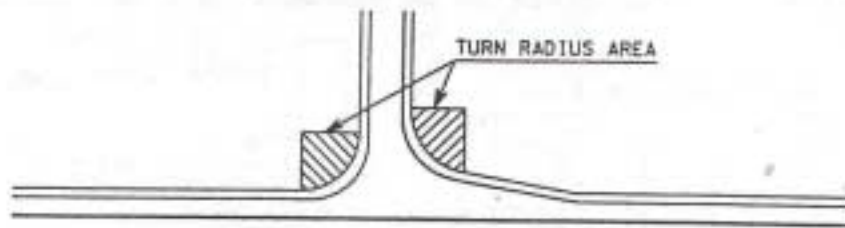
* Recovery Area: (Shld. width) + (3:1 slope distance) + (Control Zone distance - Shld. width) = (8) + (12) + (16 - 8) = 28 feet

Supplemental Information

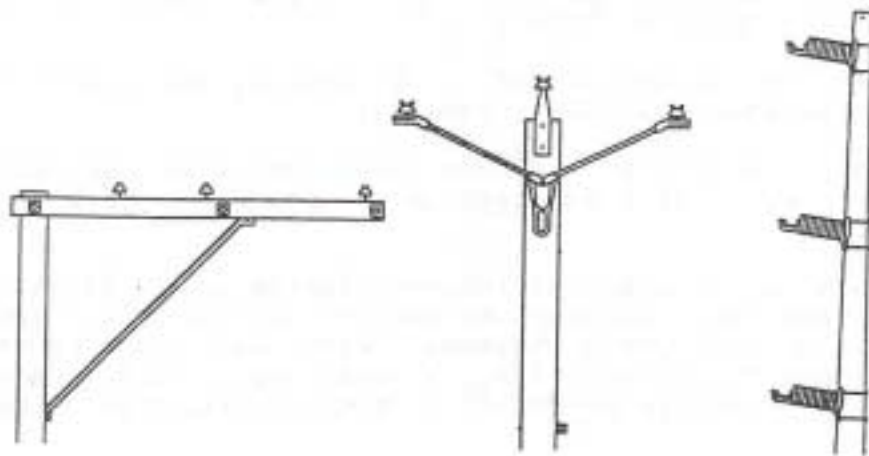
Utility Design Considerations

The following items are provided as a guide to the Utility Industry for consideration during design and maintenance of their facilities:

1. Horizontal Curves. If it is not necessary, do not place utility objects on the outside of horizontal curves.
2. Public Grade Intersections. If possible, design the facility to place utility objects outside the turn radius area of Public Grade Intersections, if this is not possible the facility should be placed outside the control zone.



3. Placement of Utility Objects behind Guardrail. Allow a minimum of 3.5 feet from face of guardrail to face of utility object. This allows the guardrail to function properly if struck (acts as a tension ribbon).
4. Service poles. Place service poles on owners property, not state right of way. Consideration should be given to placing the service pole as far as practical from the highway right of way—at least outside the control zone.
5. Pole Design. Where control zone requirements within the highway right of way are tight, consideration should be given to alternate pole designs. The purpose of the alternate designs is to allow construction at/or close to the right of way line.



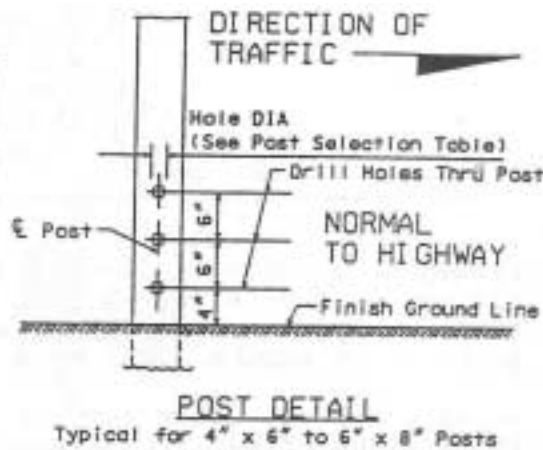
Supplemental Information

Utility Design Considerations

6. Guy Poles/Wires. Guy poles and/or wires are not to be installed between the pole line and highway lanes unless the guy pole/wire is outside the control zone. Consideration should be given to utilizing breakaway designs on guy poles within control zone.
7. Utility Location Markers. Markers used to identify or protect utility facilities, such as a telephone pedestal, may not be larger than a 4 x 4 wood post unless drilled to accommodate breakaway. Solid markers, such as concrete, may not be used. Telephone pedestals that meet the breakaway criteria are acceptable to be placed within the control zone.

ZONE.

POST SIZE	NO. OF POSTS	HOLE DIA
	4 x 4	—
	4 x 6	1 3/4"
	6 x 6	1 3/4"
	6 x 8	2 1/2"



Note: Posts that are larger than 6"x 8" require barrier protection when located within the Control Zone.

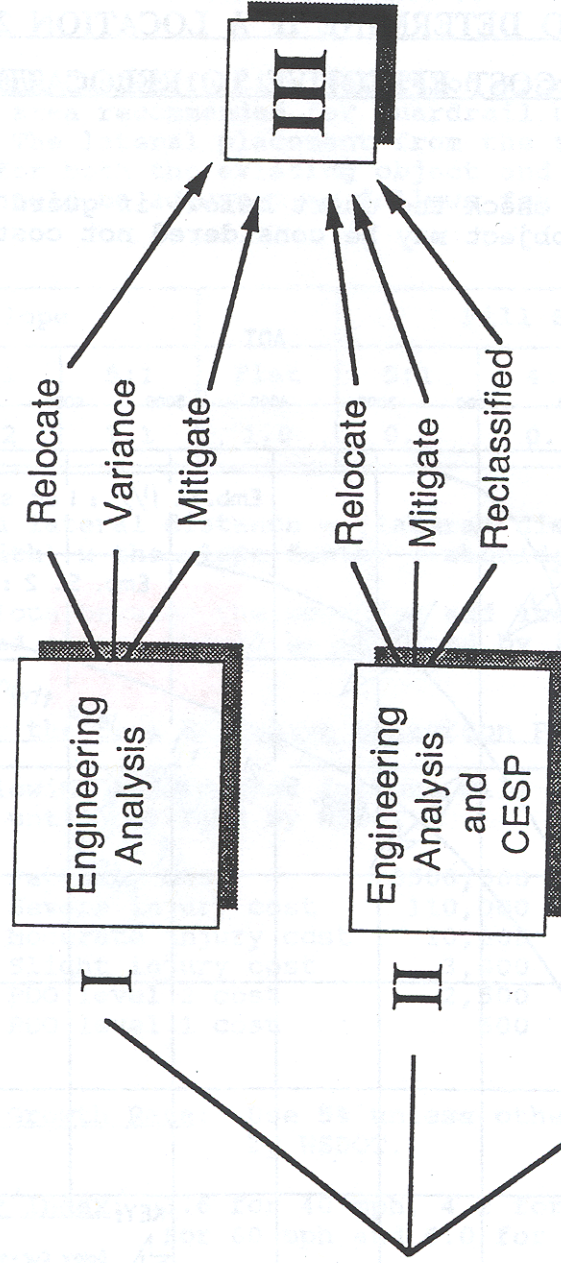
8. Cutting/Trimming Trees and Brush

Mutual benefits can be achieved through clearing trees and brush to the state's right of way line:

- a. Allows installation of the utility facility at/or close to the right of way line.
- b. Provides better access to the utility for construction and maintenance of their facility.
- c. Improves safety. Removes trees, which in themselves may be a hazard, and also opens up the roadway to increased sunlight.

For aesthetics and other reasons listed above, it is often preferred that the trees be removed flush with the ground rather than topped or trimmed. Prior to cutting or trimming trees and brush the utility should coordinate and receive approval from the appropriate District Utilities Engineer.

Control Zone Decision Paths

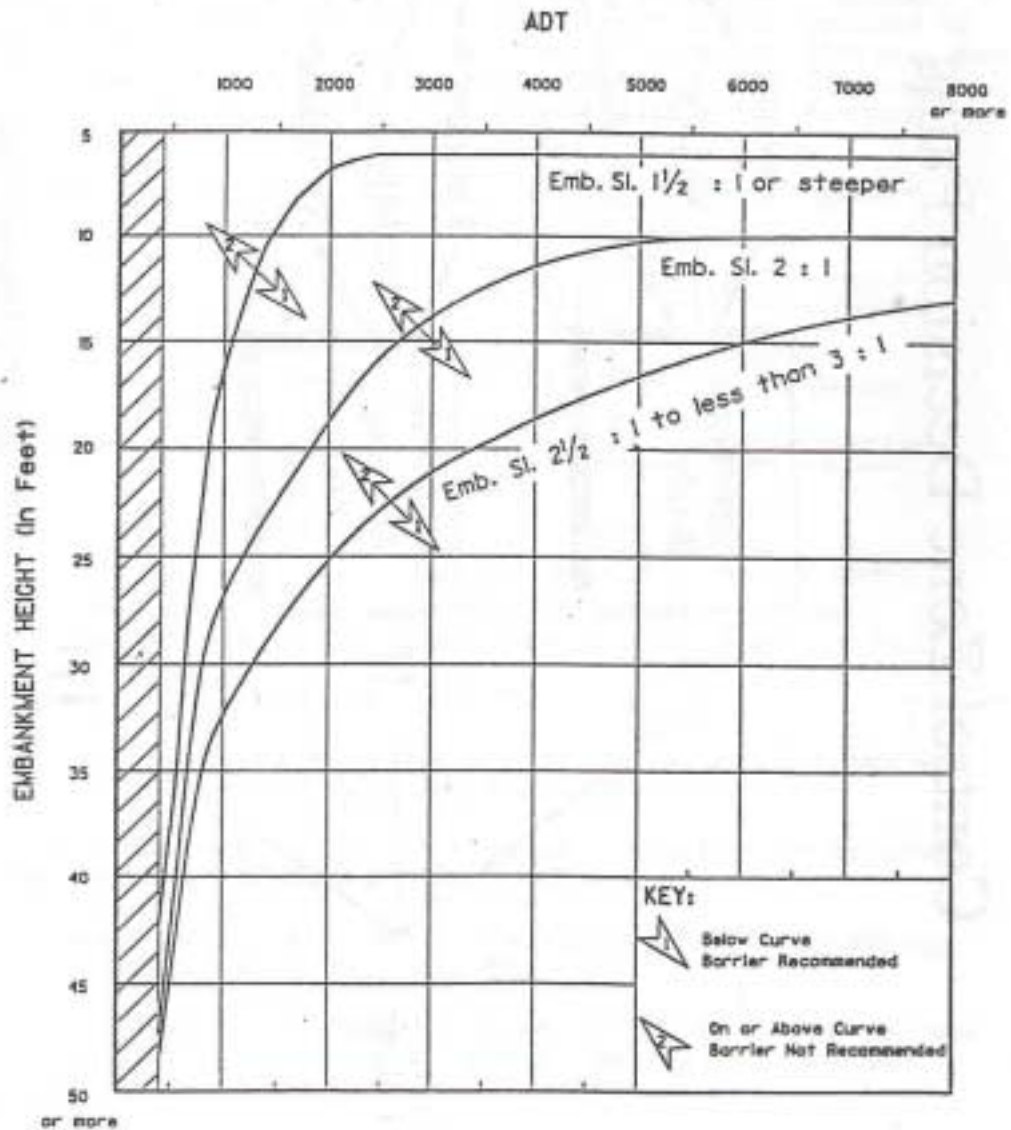


Is the facility location I, II, or III?

CESP means Cost Effective Selection Procedure.
Engineering Analysis means Engineering feasibility study.

Attachment A
Process to Determine If A Location 2 Object
Is Cost Effective To Relocate

1. In a fill area check the chart below, if guard rail is warranted the object may be considered not cost effective to relocate.



NOTE: Routes with ADTs under 400 may be evaluated on a case by case basis.

GUIDELINES FOR EMBANKMENT BARRIER

ATTACHMENT A

2. Complete the Cost-Effective Selection Procedure for objects not in an area recommended for guardrail using the AASTO formula. The lateral placement from the traveled way to the objects (for both the existing object and the relocated object) should be adjusted as follows for the side slopes:

Cut Slope				Fill Slope		
3:1	4:1	5:1	Flat	5:1	4:1	3:1
1.5	1.2	1.5	1.0	0.8	0.7	0

Adjusted lateral distance = (lateral distance – shoulder width x the slope factor + shoulder width.

(Each slope between the shoulder and the existing object or relocated object should be adjusted by its factor.)

Variables for the Cost Effective Selection Procedure:

The following AASHTO cost factors will be used in the CESP formula until notified by WSDOT.

- | | |
|-------------------------|-----------|
| 1. Fatality cost | \$500,000 |
| 2. Severe injury cost | \$110,000 |
| 3. Moderate injury cost | \$ 10,000 |
| 4. Slight injury cost | \$ 3,000 |
| 5. PDO level 2 cost | \$ 2,500 |
| 6. PDO level 1 cost | \$ 500 |

Traffic Growth Rate: Use 5% unless otherwise indicated by WSDOT.

Severity Index: 3.6 for 40 mph, 4.2 for 50 mph, 5.0 for 60 mph and 6.0 for 70 mph.

Project Life: Life of the existing or new pole.

Discount Rate: The rate shall be equal to the weighted rate average cost of capital for each utility.

Cost of Installation: Determined by the utility for the installation being evaluated.

Cost of Repair: Determined by the utility for the installation being evaluated.

Attachment A

Maintenance Cost per Year: Determined by the utility for the installation being evaluated.

Salvage Value: Determined by the utility for the installation being evaluated.

The initial encroachment frequencies should be as follows:

<u>Highway Type</u>	<u>Initial Encroachment Frequency (encroachments/mile/year)</u>
Rural Interstate	0.0009 ADT
Rural Multilane Divided Highway	0.00059 ADT
Wide Rural Two-Lane Highway (Roadbed \geq 36 ft.)	0.000742 ADT
Narrow Rural Two-Lane Highway (Roadbed $<$ 36 ft.)	0.00121 ADT
Urban Interstate	0.0009 ADT
Urban Multilane Divided Highway	0.0009 ADT
Urban Street	0.00133 ADT

4 *Scenic Classification for Utilities Accommodation on State Highway Right of Way*

Memorandum of Understanding Related to Scenic Classification for Utilities Accommodation On State Highway Rights of Way

This Memorandum of Understanding by and between the Washington State Department of Transportation, hereinafter referenced “WSDOT,” and the Washington Utilities Coordinating Council, hereinafter referenced “WUCC,” establishes objectives and procedures for the continued operation and upgrading of the scenic classification system.

IT IS MUTUALLY RECOGNIZED THAT:

WSDOT is charged with the management of the State’s highway rights of way which includes the accommodation of utilities in a compatible fashion relative to preserving scenic quality as well as the operational needs of the highway.

WUCC, through its member organizations, is responsible for the installation and maintenance of utility lines as prescribed in the Washington Administrative Codes contained in the “Utilities Accommodation Policy,” WSDOT publication number M 22-86 (HR).

The original Legislative intent when they established the Scenic and Recreational Highway System, was that all overhead utilities should be underground along these highways.

Recognizing that the intended undergrounding mandate was not only unreasonable but also unnecessary in many cases for preserving scenic quality on the State’s Scenic and Recreational Highway System, the Legislative charged the WSDOT and the Aerial Utility Industry to work out a more reasonable plan.

A scenic classification system was developed through the cooperation of the WSDOT and the Aerial Utility Industry and said system is described in WAC 468-34-330 “Scenic Enhancement” in the WSDOT publication M 22-86 (HR). It is the basic aesthetic criteria for the accommodation of overhead utilities on the State’s highway system.

The scenic classification system requires periodic updating. The character of the landscape elements outside highway rights of way are ever-changing whether it be by man-made or natural causes. Also,

the State's highways are continually changing through upgrading, realignment, new highways, and transfer of ownership.

Nothing in this Memorandum or Understanding is to be construed as conflicting with existing laws, regulations, and prescribed responsibilities.

In recognition of the responsibilities, interests, and limitations set forth above, and the mutual benefits of established procedures to facilitate agreement on specific matters, the WSDOT and the WUCC mutually agree as follows:

I. SCENIC CLASSIFICATION SYSTEM

The scenic classification system, originally established in 1973, must be updated approximately once every two years depending upon need, and as mutually agreed upon. A scenic classification team shall be formed for these updates. The methodology should be compatible to the original survey procedure.

II. RESPONSIBILITIES

A. The WUCC will:

1. Provide and cover per diem costs for one member of the scenic classification team. That member's company will cover salary and fringe benefits.
 - a. Normally should involve 10 working days or less. If the estimated amount of time exceeds 10 working days, approval of the WUCC Board of Directors is required for the additional expenditure.
 - b. Recommend a different team member for each update to maximize exposure of the process.
2. Provide WSDOT a list of highways that member organizations desire to be re-evaluated. The list should include mile post limits and reasons for the re-evaluation recommendations.

B. The WSDOT will:

1. Provide and cover the costs of a WSDOT Engineer and a WSDOT Landscape Architect to the team along with vehicle and driver.
2. Coordinate scenic classification update and publish updated scenic class listing.

III. LONG RANGE OBJECTIVES

To maintain the scenic class as up to date as possible.

To get all overhead utilities in consonance with the visual and functional needs of the State's highway system.

III. CONCLUSIONS AND APPROVALS

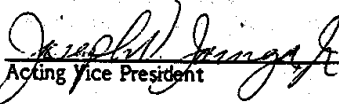
- A. This Memorandum of Understanding may be amended or supplemented by mutual agreement between the signers or their successors. This Memorandum of Understanding may be terminated by either party through written notice to the other.
- B. We have read the foregoing and agree to accept and abide by the procedure and objectives herein.

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

By:  Dec. 10, 1984
Project Development Engineer Date

WASHINGTON UTILITIES
COORDINATING COUNCIL

By:  12/12/84
Acting President Date

 12/11/84
Acting Vice President Date

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
2	0.0	0.8	D
	0.8	2.1	C
	2.1	4.5	BX
	4.5	5.6	C
	5.6	6.5	B
	6.5	11.8	BX
	11.8	12.3	B
	12.3	31.5	C
	31.5	32.6	BX
	32.6	35.2	C
	35.2	38.3	BX
	38.3	40.0	C
	40.0	56.8	BX
	56.8	58.6	B
	62.3	68.5	B
	68.5	90.4	BX
	90.4	99.2	A
	99.2	100.0	B
	100.0	108.0	BX
	108.0	108.6	A
	108.6	112.6	BX
	112.6	114.0	B
	114.0	119.3	BX
	119.3	119.8	B
	119.8	120.8	A
Equation	120.77 BK =	127.83 AH	
	127.8	132.2	BX
	132.2	133.0	C
	133.0	133.6	BX
	133.6	138.6	AX
	138.6	140.4	BX
	140.4	146.0	B
	146.0	149.4	BX
	149.4	149.8	C
	149.8	150.8	B
	150.8	151.8	BX
	151.8	154.1	C
	154.1	169.3	BX
	172.1	172.8	A
	172.8	186.9	BX
	186.9	191.0	AX
	191.0	191.7	C
	191.7	201.1	BX
	201.1	202.2	C

SR	MP	MP	CLASS
2	202.2	220.0	BX
	220.0	222.6	C
	222.6	230.1	BX
	230.7	236.6	BX
	236.6	237.3	B
	237.3	250.5	BX
	250.5	251.6	C
	251.6	263.5	BX
	263.5	265.8	C
	265.8	271.7	BX
	271.7	273.6	C
	273.6	274.0	BX
	274.0	282.2	C
	282.2	283.2	BX
	283.2	286.9	*
* Coincident with SR 090	277.7	281.3	
	286.9	290.5	D
	290.5	290.9	C
	290.9	291.7	D
	291.7	294.9	C
	294.9	295.6	BX
	295.6	309.7	C
	309.7	313.1	BC
	313.1	315.0	C
	315.0	324.4	BX
	324.4	326.7	C
	326.7	331.0	BX
	331.0	334.9	C
2Cou/Evr	0.8	1.6	BX(p)
2Cou/Bro	287.5	288.1	BX(p)
2Cou/Div	289.2	290.7	BX(p)
2Cou/Nwp	334.4	334.8	BX(p)
3	0.0	1.6	C
	1.6	3.5	BX
	4.3	8.6	BX
	8.6	10.0	C
	10.0	20.4	BX
	20.4	22.0	C
	22.0	23.5	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
3	23.5	26.8	C
	26.8	30.4	BX
	30.4	31.5	C
	31.5	33.3	BX
	33.3	35.4	C
	35.4	36.9	BX
	36.9	37.7	C
	37.7	45.9	BX
	45.9	47.0	C
	50.6	52.3	C
	52.3	54.7	BX
	54.7	55.4	C
	55.4	60.0	BX
4	0.0	2.2	BX
	2.2	5.0	C
	5.0	6.3	BX
	6.3	7.0	C
	7.0	8.3	BX
	8.3	15.0	C
	15.0	23.8	BX
	23.8	29.4	C
	29.4	33.5	BX
	36.6	45.2	BX
	45.2	47.5	A
	47.5	54.4	BX
	54.4	60.7	C
	60.7	62.2	D
4Cou/Kel	61.7	61.9	BX(p)
5	0.0	1.0	C
	1.0	3.0	BX
	3.0	10.3	C
	10.3	11.1	BX
	11.1	13.6	B
	13.6	20.0	BX
	20.0	22.0	C
	22.0	29.8	BX
	29.8	30.5	C
	30.5	57.7	BX
	57.7	59.8	C
	59.8	77.5	BX
	77.5	79.1	C
	79.1	82.4	B
	82.4	84.6	C

SR	MP	MP	CLASS
5	84.6	88.6	BX
	88.6	92.1	B
	92.1	102.0	BX
	102.0	103.4	C
	103.4	104.8	B
	104.8	109.0	C
	109.0	113.4	BX
	113.4	115.0	B
	115.0	117.0	BX
	117.0	133.6	C
	133.6	134.4	B
	134.4	151.6	C
	151.6	155.0	BX
	155.0	160.3	C
	160.3	167.3	A
	167.3	168.3	B
	168.3	169.2	A
	169.2	170.0	B
	170.0	172.8	BX
	172.8	186.0	C
	186.0	188.7	BX
	188.7	190.6	C
	190.6	192.3	BX
	192.3	192.7	C
	192.7	196.9	BX
	196.9	199.6	C
	199.6	202.4	BX
	202.4	203.9	C
	203.9	204.4	BX
	204.4	206.0	C
	206.0	211.7	BX
	211.7	212.8	C
	212.8	225.0	BX
	225.0	227.8	C
	227.8	235.6	B
	235.6	244.5	BX
	244.5	245.4	B
	245.4	251.5	BX
	251.5	260.0	C
	260.0	273.1	BX
	273.1	274.5	C
	274.5	276.6	B
6	0.0	8.5	C
	8.5	14.3	BX
	14.3	15.3	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
6	15.3	27.9	BX
	27.9	28.7	C
	28.7	47.9	BX
	47.9	49.1	C
	49.1	51.4	BX
7	0.0	0.4	B
	1.0	4.9	C
	4.9	11.4	BX
	11.4	12.7	C
	12.7	13.0	AX
	13.0	15.2	BX
	15.2	17.2	C
	17.2	19.4	BX
	19.4	21.7	C
	21.7	22.3	BX
	22.3	23.4	C
	23.4	25.9	BX
	25.9	26.4	C
	26.4	27.6	B
	27.6	31.0	C
	31.0	31.5	AX
	31.5	33.4	C
	33.4	35.3	BX
	35.3	35.4	AX
	35.4	36.7	C
	36.7	37.5	BX
	37.5	41.0	C
	41.0	44.6	BX
	44.6	48.0	C
	48.0	49.4	D
	49.4	50.0	C
	50.0	54.2	D
	54.2	58.6	C
8	0.0	20.7	BX
9	0.0	7.5	C
	7.5	9.5	B
	9.5	11.3	C
	11.3	15.5	BX
	15.5	16.0	C
	16.0	17.0	BX
	17.0	18.2	C
	18.2	28.8	BX
	28.8	31.8	C

SR	MP	MP	CLASS
9	31.8	32.9	BX
	32.9	40.5	C
	40.5	44.3	BX
	44.3	54.1	C
	54.1	54.4	BX
	54.4	55.9	C
	55.9	57.2*	
* Coincident with SR 020	64.8	66.1	
	57.2	63.9	C
	63.9	71.0	BX
	71.0	73.9	C
	73.9	77.0	BX
	77.0	79.4	C
	79.4	84.0*	
* Coincident with SR 542	10.0	14.6	
	84.0	86.8	BX
	86.8	92.8	C
	92.8	96.5	BX
	96.5	97.4	C
	97.4	98.2	BX
9Spur	98.0	98.2	BX(p)
10	88.3	89.6	BX
	89.6	94.2	B
	94.2	94.9	A
	94.9	96.6	B
	96.6	98.3	AX
	98.3	99.3	B
	99.3	100.1	C
	100.1	102.4	BX
	102.4	104.3	C
	104.3	104.5	BX
11	0.0	9.0	B
	9.0	9.3	A
	9.3	11.7	B
	11.7	15.0	A
	15.0	15.9	B
	15.9	16.7	C
	16.7	18.4	BX
	18.4	21.3	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
12	0.0	0.6	D
	0.6	1.4	BX
	1.4	8.3	C
	8.3	9.1	BX
	9.1	11.2	C
	11.2	16.2	BX
	16.2	18.0	B
	18.0	18.6	BX
	18.6	21.0	B
	21.0	23.0	C
	23.0	34.6	BX
	34.6	35.6	C
	35.6	40.0	BX
	40.0	42.3	C
	42.3	46.6	BX
	46.6	66.5*	
* Coincident with SR 005	68.4	88.3	
	66.5	70.9	C
	70.9	71.3	BX
	71.3	82.0	C
	82.0	82.3	BX
	82.3	84.5	C
	84.5	86.0	BX
	86.0	88.9	C
	88.9	93.4	BX
	93.4	94.2	C
	94.2	98.5	BX
	98.5	102.0	C
	102.0	104.5	BX
	104.5	112.2	C
	112.2	112.7	BX
	112.7	113.6	C
	113.6	114.8	BX
	114.8	115.2	C
	115.2	119.0	B
	119.0	120.5	BX
	120.5	126.5	C
	126.5	130.5	BX
	130.5	132.6	C
	132.6	141.9	BX
	141.9	145.6	B
	145.6	151.4	A
	151.4	153.0	B
	153.0	156.8	A

SR	MP	MP	CLASS
12	156.8	160.4	B
	160.4	166.9	A
	166.9	189.0	BX
	189.0	200.4	C
	200.4	202.9	BX
	202.9	273.9	*
* Coincident with SR 82	31.4	102.6	
	273.9	291.7	*
* Coincident with SR 182	0.0	15.2	
	291.7	299.3	C
	299.3	304.0	BX
	304.0	307.4	C
	307.4	316.0	BX
	316.0	317.7	AX
	317.7	319.5	BX
	319.5	338.4	C
	338.4	339.0	BX
	339.0	341.0	C
	341.0	347.5	BX
	347.5	353.0	C
	353.0	357.0	BX
	357.0	374.6	C
	374.6	376.0	BX
	376.0	378.3	C
	378.3	383.5	BX
	383.5	413.0	C
	413.0	413.6	B
	413.6	425.4	BX
	425.4	432.6	B
	432.6	434.2	C
12Cou/Abr	0.3	0.7	BX(p)
14	0.0	6.5	C
	6.5	11.3	BX
	11.3	15.5	C
	15.5	16.8	BX
	16.8	17.4	C
	17.4	19.6	B
	19.6	24.6	BX
	24.6	25.2	A
	25.2	27.0	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
14	27.0	29.0	C
	29.0	38.1	BX
	38.1	39.7	B
	39.7	42.0	BX
	42.0	45.8	C
	45.8	63.5	BX
	63.5	64.7	AX
	64.7	65.9	BX
	65.9	67.1	C
	67.1	72.4	BX
	72.4	75.9	AX
	75.9	76.5	C
	76.5	85.6	BX
	85.6	85.9	AX
	85.9	87.9	BX
	87.9	91.7	AX
	91.7	92.7	BX
	92.7	95.5	AX
	95.5	97.5	B
	97.5	99.0	A
	99.0	101.0	BX
	101.0	101.4	*
* Coincident with SR 097	1.9	2.3	
	101.4	105.8	BX
	105.8	108.3	AX
	108.3	115.8	BX
	115.8	118.0	B
	118.0	120.0	A
	120.0	124.9	BX
	124.9	127.6	A
	127.6	129.3	BX
	129.3	130.7	B
	130.7	158.3	BX
	158.3	159.4	C
	159.4	162.0	BX
	162.0	162.8	C
	162.8	180.8	BX
14Spur	100.1	101.1	BX(p)
16	0.0	0.7	D
	0.7	4.6	C
	4.6	5.0	B

SR	MP	MP	CLASS
Equation	005.04 BK =	007.23 AH	
16	7.2	8.4	A
	8.4	11.6	BX
	11.6	13.4	C
	13.4	14.8	BX
	14.8	15.7	C
	15.7	16.5	BX
	16.5	17.1	C
	17.1	27.8	BX
	27.8	29.0	C
16Spur	28.7	29.1	BX(p)
17	7.4	10.0	BX
	10.0	41.6	C
	41.6	42.0	BX
	42.0	53.3	C
	53.3	53.8	BX
	53.8	55.6	C
	55.6	62.4	BX
	62.4	70.7	C
	70.7	73.5	B
	73.5	76.4	C
	76.4	78.6	B
	78.6	87.0	A
	87.0	95.9	B
	95.9	96.6	C
	96.6	98.3*	
* Coincident with SR 002	187.4	188.6	
	98.3	99.6	BX
	99.6	102.5	C
	102.5	113.7	BX
	113.7	121.9	C
	121.9	125.1	C
	125.1	133.2	BX
	133.2	136.4	C
	136.4	144.2	BX
18	2.2B	2.7B	C
Equation	002.73 BK =	000.0 AH	
	0.0	2.0	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
18	2.0	3.5	BX
	2.2	2.7	C
	3.5	4.2	D
	4.2	6.2	C
	6.2	6.7	BX
	6.7	12.2	C
	12.2	16.5	BX
	16.5	22.0	C
	22.0	27.9	BX
19	0.0	14.2	BX(p)
20	0.0	2.2	BX
	2.2	2.6	B
	2.6	6.0	BX
	6.0	6.6	C
	6.6	7.8	BX
	7.8	11.1	C
	11.1	11.6	B
	11.6	12.9	C
	12.9	15.3	B
	15.3	16.3	C
	16.3	17.6	BX
	17.6	19.2	B
	19.2	22.7	BX
	22.7	25.3	C
	25.3	30.5	BX
	30.5	31.3	C
	31.3	31.7	D
	31.7	36.0	C
	36.0	39.6	BX
	39.6	40.4	C
	40.4	41.0	BX
	41.0	42.2	A
	42.2	43.3	B
	43.3	44.8	BX
	44.8	45.3	C
	45.3	48.5	BX
	48.5	49.0	C
	49.0	50.6	BX
	50.6	53.5	C
	53.5	57.0	BX
	57.0	58.8	BX
	58.8	59.7	BX
	59.7	60.3	D
	60.3	62.8	C

SR	MP	MP	CLASS
20	62.8	63.3	BX
	63.3	66.9	C
	66.9	70.3	BX
	70.3	71.8	C
	71.8	74.0	BX
	74.0	77.8	C
	77.8	80.5	BX
	80.5	82.8	C
	82.2	84.7	BX
	84.7	86.3	C
	86.3	86.7	BX
	86.7	91.7	C
	91.7	92.0	BX
	92.0	92.8	C
	92.8	101.8	BX
	101.8	102.5	C
	102.5	104.8	BX
	104.8	111.0	C
	111.0	114.0	BX
	114.0	120.4	C
	120.4	128.0	A
	128.0	130.5	B
	130.5	135.6	A
	135.6	141.2	B
	141.2	169.9	A
	169.9	173.0	B
	173.0	192.8	BX
	192.8	193.0	A
	193.0	199.5	BX
	199.5	202.9	C
	202.9	208.6	BX
	204.1	232.4	BX
	232.4	232.9	C
	232.9	233.3	B
	233.3	262.0	*
* Coincident with SR 097	286.2	314.8	
	262.0	262.8	BX
	262.8	266.6	C
	266.6	275.4	C
	275.4	276.4	C
	276.4	299.0	BX
	299.0	303.5	C
	303.5	342.1	BX
	342.1	354.3	*

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
* Coincident with SR 395	229.6	241.9	
	354.3	355.4	C
	355.4	388.8	BX
	388.8	390.4	C
	390.4	400.0	BX
	400.0	400.4	C
	400.4	418.7	BX
	418.7	419.2	C
	419.2	420.4	B
	420.4	436.7	BX
	436.7	436.9	C
020Spur	47.9	50.6	BX
	50.6	51.0	C
	51.0	52.0	B
	52.0	53.8	C
	53.8	55.6	BX
21	0.0	4.4	C
	4.4	23.6	BX
	23.6	24.8*	
* Coincident with SR 395	81.1	82.3	
Equation	24.79 BK =	0.0 AH	
	0.0	4.5	C
	4.5	31.2	BX
	31.2	33.0	C
	33.0	33.6	BX
	33.6	66.7	B
	66.7	67.6	BX
	67.6	68.1*	
* Coincident with SR 002	220.1	221.5	
	68.1	68.5	C
	68.5	69.0	B
	68.5	69.0	BX
	69.0	72.1	C
	72.1	73.5	BX
	73.5	74.0	C
	74.0	75.0	BX
	75.0	81.5	B
	81.5	87.0	BX
	87.0	88.1	AX

SR	MP	MP	CLASS
21	88.1	91.6	BX
	93.0	135.8	BX
	135.8	138.3	*
* Coincident with SR 020	302.7	305.2	
	138.3	140.2	C
	140.2	167.0	BX
22	0.0	5.0	C
	5.0	9.4	BX
	9.4	13.2	C
	13.2	20.0	BX
	20.0	32.4	C
	32.4	33.9	BX
	33.9	34.5	C
	34.5	35.3	BX
	35.3	36.4	C
23	0.0	21.6	C
	21.6	27.0	BX
	27.0	35.3	C
	35.3	42.7	BX
	42.7	43.7	C
	43.7	65.0	BX
	65.0	65.9	C
24	0.0	1.3	BX
	1.3	5.4	B
	5.4	7.0	C
	7.0	18.1	BX
	18.1	20.5	C
	20.5	41.3	BX
	41.3	42.4	B
	42.4	46.0	BX
	46.0	69.6	C
	69.6	72.5	BX
	72.5	75.0	B
	75.0	77.5	C
	77.5	79.0	BX
	79.0	79.6	D
25	0.0	5.4	C
	5.4	6.2	BX
	6.2	8.1	C
	8.1	13.0	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
25	13.0	13.8	C
	13.8	15.8	BX
	15.8	17.5	C
	17.5	21.1	BX
	21.1	21.5	B
	21.5	22.4	AX
	22.4	23.5	B
	23.5	26.6	AX
	26.6	30.4	C
	30.4	33.6	BX
	33.6	36.9	C
	36.9	37.3	BX
	37.3	38.3	C
	38.3	41.9	BX
	41.9	42.6	C
	42.6	46.8	BX
	46.8	49.7	C
	49.7	53.7	BX
	53.7	55.0	AX
	55.0	61.1	BX
	61.1	63.0	AX
	63.0	65.9	BX
	65.9	68.0	C
	68.0	74.4	BX
	74.4	76.3	C
	76.3	79.3	BX
	79.3	81.1	C
	81.1	112.8	BX
	112.8	113.9	C
	113.9	121.2	BX
26	0.0	1.9	AX
	1.9	33.0	BX
	33.0	35.8	C
	35.8	37.4	BX
	37.4	42.6	C
	42.6	82.7	BX
	82.7	83.2	C
	83.2	90.5	BX
	90.5	93.4	B
	93.4	100.0	BX
	100.0	103.5	C
	103.5	118.8	BX
	118.8	133.5	C
26Spur	133.4	133.5	BX(p)

SR	MP	MP	CLASS
27	0.0	0.7	D
	0.7	2.3	C
	2.3	2.4	*
* Coincident with SR 270	2.3	2.4	
	2.4	7.0	C
	7.0	14.3	BX
	14.3	15.0	D
	15.0	16.3	C
	16.3	22.0	BX
	22.0	35.7	C
	35.7	36.5	D
	36.5	47.6	BX
	47.6	48.0	C
	48.0	48.2	D
	48.2	50.0	C
	50.0	55.0	BX
	55.0	56.4	C
	56.4	63.2	BX
	63.2	64.1	C
	64.1	75.1	BX
	75.1	75.5	C
	75.5	83.1	BX
	83.1	86.6	C
	86.6	87.2	BX(p)
28	.0B	1.8B	BX
	1.8B	4.5B	C
Equation	004.46 BK =	000.31 AH	
	0.3	0.7	C
	0.7	5.7	BX
	5.7	11.0	C
	11.0	17.0	BX
	17.0	18.7	B
	18.7	19.6	BX
	19.6	21.8	AX
	21.8	23.3	BX
	23.3	23.9	AX
	23.9	26.4	BX
	26.4	40.1	C
	40.1	43.4	BX
	43.4	51.2	C
	51.2	51.7	BX
	51.7	52.9	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
28	52.9	56.0	BX
	56.0	57.0	C
	57.0	58.0	BX
	58.0	61.2	C
	61.2	65.5	BX
	65.5	67.0	C
	67.0	82.0	BX
	82.0	91.2	C
	91.2	92.6	BX
	92.6	115.4	C
	115.4	116.9	BX
	116.9	118.0	D
	118.0	129.4	C
	129.4	130.4	BX
	130.4	131.2	D
31	0.0	1.1	C
	1.1	1.9	BX
	1.9	4.4	C
	4.4	12.5	BX
	12.5	12.8	C
	12.8	14.2	BX
	14.2	15.0	C
	15.0	26.8	BX
82	0.0	3.6	B
	3.6	11.3	A
	11.3	15.0	B
	15.0	17.0	A
	17.0	20.8	B
	20.8	24.5	A
	24.5	28.3	BX
	28.3	29.3	C
	29.3	30.0	BX
	30.0	39.3	C
	39.3	47.0	BX
	47.0	48.3	C
	48.3	67.5	BX
	67.5	82.8	C
	82.8	131.6	BX
	131.6	132.6	BX(p)
90	2.4	4.2	C
	4.2	5.9	A
	5.9	14.2	C
	14.2	14.9	BX

SR	MP	MP	CLASS
90	14.9	17.6	C
	17.6	34.0	BX
	34.0	55.3	B
	55.3	60.7	AX
	60.7	118.0	BX
	118.0	121.4	C
	121.4	123.0	BX
	123.0	126.9	AX
	126.9	136.0	BX
	136.0	137.7	B
	137.7	139.6	A
	139.6	141.3	BX
	141.3	141.8	A
	141.8	147.0	B
	147.0	151.3	BX
	151.3	152.0	B
	152.0	164.3	BX
	164.3	169.8	C
	169.8	174.0	BX
	174.0	175.5	C
	175.5	175.9	BX
	175.9	176.5	C
	176.5	177.8	B
	177.8	187.0	C
	187.0	188.3	BX
	188.3	191.9	C
	191.9	228.1	BX
	228.1	228.8	B
	228.8	233.3	BX
	233.3	253.0	B
	253.0	277.4	BX
	277.4	279.1	B
	279.1	279.5	BX
	279.5	290.8	C
	290.8	294.0	BX
	294.0	298.2	B
	298.2	300.0	BX
92	0.0	2.7	BX
	2.7	3.4	C
	3.4	4.5	BX
	4.5	6.5	C
	6.5	7.9	BX(p)
	7.9	8.3	C
95	0.0	0.9	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
96	0.0	6.8	BX(p)
97	0.0	0.6	B
	0.6	5.7	A
	5.7	6.5	AX
	6.5	12.8	BX
	12.8	16.3	C
	16.3	51.3	BX
	51.3	56.9	A
	56.9	58.7	BX
	58.7	76.4	C
	76.4	114.2	*
* Coincident with SR 082	0.0	37.8	
	114.2	119.0	*
* Coincident with SR 090	106.1	110.9	
Equation	119.30 BK =	133.90 AH	
	133.9	134.3	C
	134.3	135.3	BX
	135.3	137.5	C
	137.5	147.0	BX
	147.0	148.0	AX
	148.0	183.9	BX
	183.9	185.0	B
	185.0	213.0	*
* Coincident with SR 002	104.7	213.0	
Equation	199.98 BK =	199.83 AH	
Equation	212.98 BK =	213.00 AH	
	213.0	235.3	BX
	235.3	235.9	C
	235.9	236.5	B
	236.5	236.9	A
	236.9	237.5	C
	237.5	253.8	BX
	253.8	255.2	C
	255.2	258.1	BX
	258.1	261.6	C
	261.6	262.7	BX

SR	MP	MP	CLASS
97	262.7	263.8	C
	263.8	282.1	BX
	282.1	288.9	C
	288.9	290.9	BX
	290.9	292.5	C
	292.5	314.6	BX
	314.6	322.5	C
	322.5	331.0	BX
	331.0	333.0	C
	333.0	336.5	BX
97Alternate	199.8	200.0	B
	200.0	203.0	C
	203.0	206.2	B
	206.2	207.0	C
	207.0	207.8	B
	207.8	209.9	C
	209.9	214.0	B
	214.0	224.4	C
	224.4	224.9	B
	224.9	228.3	BX
	228.3	230.3	B
	230.3	232.0	BX
	232.0	236.3	C
	236.3	239.6	BX
97Couplet	2.6	2.7	BX(p)
97Spur	213.4	213.6	BX(p)
99	0.0	14.2	C
	14.2	15.7	D
	15.7	19.3	C
	19.3	22.5	D
	22.5	26.2	C
	26.2	26.8	BX
	26.8	28.6	D
	28.6	29.0	C
	29.0	30.2	D
	30.2	32.0	C
	32.0	36.0	B
	36.0	36.9	BX
	36.9	38.8	D
	38.8	39.2	C
	39.2	47.2	D
	47.2	50.3	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
99	50.3	50.8*	
* Coincident with SR 525	2.3	2.8	
	50.8	55.4	C
100	0.0	4.7	BX(p)
100Spur	3.0	3.6	BX(p)
101	0.0	0.5	A
	0.5	3.5	BX
	3.5	7.6	C
	7.6	9.4	BX
	9.4	11.2	C
	11.2	11.9	D
	11.9	18.3	C
	18.3	20.8	BX
	20.8	24.9	AX
	24.9	45.1	BX
	45.1	47.5	AX
	47.5	53.3	BX
	53.3	61.1	C
	61.1	61.8	BX
	61.8	66.2	C
	66.2	70.9	BX
	70.9	77.0	C
	77.0	78.5	BX
	78.5	83.2	C
	83.2	85.8	D
	85.8	91.1	C
	91.1	105.5	BX
	105.5	106.6	C
	106.6	109.1	BX
	109.1	110.1	C
	110.1	122.2	BX
	122.2	123.4	C
	123.4	126.3	AX
	126.3	126.7	BX
	126.7	127.3	C
	127.3	128.5	BX
	128.5	128.7	C
	128.7	129.4	AX
	129.4	131.1	BX
	131.1	134.2	C
	134.2	148.3	BX
	148.3	149.5	C

SR	MP	MP	CLASS
101	149.5	151.8	BX
	151.8	152.3	C
	152.3	158.1	BX
	158.1	158.6	AX
	158.6	165.0	BX
	165.0	168.0	AX
	168.0	171.6	BX
	171.6	172.1	C
	172.1	181.3	BX
	181.3	181.6	C
	181.6	185.5	BX
	185.5	185.9	C
	185.9	189.9	BX
	189.9	196.0	C
	196.0	198.8	BX
	198.8	199.5	C
	199.5	203.0	BX
	203.0	204.2	C
	204.2	204.7	BX
	204.7	205.2	C
	205.2	221.3	BX
	221.3	223.5	A
	223.5	223.9	B
	223.9	224.5	A
	224.5	225.0	B
	225.0	227.0	A
	227.0	228.3	B
	228.3	228.9	A
	228.9	229.4	B
	229.4	231.2	A
	231.2	232.0	B
	232.0	243.2	BX
	243.2	252.0	C
	252.0	253.0	B
	253.0	253.9	BX
	253.9	261.2	B
	261.2	265.9	C
	265.9	270.2	BX
	270.2	273.8	C
	273.8	281.5	BX
	281.5	282.8	C
	282.8	284.7	BX
	284.7	287.0	C
	287.0	292.7	BX
	292.7	295.5	C
	295.5	305.9	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
101	305.9	306.9	C
	306.9	319.7	BX
	319.7	320.1	A
	320.1	331.6	BX
	331.6	332.0	C
	332.0	336.0	BX
	336.0	341.8	C
	341.8	343.8	BX
	343.8	346.2	C
	346.2	349.5	BX
	349.5	351.0	C
	351.0	359.2	BX
	359.2	359.9	C
	359.9	361.8	BX
	361.8	365.4	C
	365.4	367.4	BX
101Alt	9.4	10.0	BX(p)
101Cou/Abe	87.5	91.7	BX(p)
101Cou/Her	83.8	83.9	BX(p)
101Cou/Prt	249.7	251.3	BX(p)
102	0.0	1.7	BX
	1.7	2.5	C
103	0.0	11.1	C
	11.1	19.9	BX(p)
104	0.2	13.9	BX
	13.9	15.5	A
	15.5	23.4	BX
	23.4	26.2	C
	26.2	26.6	D
	26.6	30.5	C
	30.5	32.0	BX
	32.0	32.3	C
104Cou/Kin	24.5	24.9	BX(p)
105	0.0	0.8	C
	0.8	1.6	BX
	1.6	2.2	C

SR	MP	MP	CLASS
105	2.2	8.5	BX
	8.5	11.7	AX
	11.7	18.5	BX
	18.5	19.8	AX
	19.8	25.7	BX
	25.7	28.0	C
	28.0	32.0	BX
	32.0	32.6	A
	32.6	37.3	BX
	37.3	37.7	B
	37.7	46.4	BX
	46.4	48.2	C
	48.2	48.8	D
105Sp/WPo	30.3	32.5	C
	32.5	33.2	D
	33.2	34.4	C
105SP/Boo	48.7	48.1	BX(p)
106	0.0	2.2	C
	2.2	20.1	BX
107	0.0	8.0	C
108	0.0	2.2	C
	2.2	3.3	BX
	3.3	4.3	B
	4.3	6.2	BX
	6.2	7.3	C
	7.3	9.4	BX
	9.4	11.9	C
109	0.0	1.8	C
	1.8	3.5	BX
	3.5	5.8	A
	5.8	15.9	BX
	15.9	16.3	C
	16.3	17.4	BX
	17.4	19.3	C
	19.3	20.7	BX
	20.7	21.6	C
	21.6	27.7	B
	27.7	27.8	AX
	27.8	29.0	BX
	29.0	32.0	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
109	32.0	34.6	BX
	34.6	35.4	AX
	35.4	40.3	BX
	40.3	40.5	D
109Cou/Hqu	0.1	0.3	BX(p)
109Spur	1.8	3.6	BX(p)
110	0.0	11.1	BX(p)
110Spur	7.8	10.5	BX(p)
112	0.0	11.0	BX
	11.0	14.4	C
	14.4	16.3	BX
	16.3	17.2	C
	17.2	20.0	BX
	20.0	26.7	C
	26.7	38.5	BX
	38.5	39.0	AX
	39.0	45.2	BX
	45.2	52.3	C
	52.3	53.7	BX
	53.7	57.7	C
	57.7	61.0	BX
	61.0	66.5	C
113	0.0	10.0	BX(p)
115	0.0	1.9	BX
	1.9	2.3	C
116	0.0	9.8	BX(p)
117	0.0	1.4	BX(p)
119	0.0	11.0	BX(p)
121	0.0	7.7	BX(p)
122	0.0	7.9	BX(p)
123	0.0	7.5	A

SR	MP	MP	CLASS
124	0.0	5.6	C
	5.6	13.3	BX
	13.3	45.0	C
125	0.0	5.0	C
	5.0	5.6	D
	5.6	23.7	C
125Spur	6.1	6.8	BX(p)
127	0.0	0.8	C
	0.8	1.8	BX
	1.8	6.1	C
	6.1	6.7	B
	6.7	9.7	BX
	9.7	10.0	B
	10.0	27.3	BX
128	0.0	0.5	C
	0.5	2.3	BX(p)
	-	-	-
129	0.0	12.0	A
	12.0	14.0	AX
	14.0	17.1	BX
	17.1	17.7	C
	17.7	24.0	BX
	24.0	31.1	B
	31.1	35.5	A
	35.5	41.7	BX
	41.7	42.6	C
129 Spur	42.2	42.4	BX(p)
131	0.0	2.1	BX(p)
141	0.0	0.3	C
	0.3	0.8	BX
	0.8	1.7	C
	1.7	12.4	BX
	12.4	13.0	C
	13.0	23.8	BX
	23.8	25.5	C
	25.5	29.3	BX
141Spur	4.7	6.9	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
142	0.0	12.3	BX
	12.3	13.4	C
	13.4	20.5	BX
	20.5	22.3	AX
	22.3	23.0	BX
	23.0	24.7	AX
	24.7	25.5	C
	25.5	27.5	BX
	27.5	28.2	C
	28.2	33.3	BX
	33.3	35.3	C
Columbia	River	Bridge	
143	0.6	1.4	BX
	1.4	2.4	C
150	0.0	2.9	C
	2.9	4.0	BX
	4.0	5.2	C
	5.2	5.5	BX
	5.5	6.8	C
	6.8	7.4	BX
	7.4	8.0	C
	8.0	8.2	BX(p)
	8.2	9.1	*
* Coincident with SR 97A	234.2	235.0	
	9.1	9.5	C
	9.5	11.1	BX
	11.1	12.8	C
	12.8	13.0	BX
153	0.0	29.5	BX
	29.5	30.7	B
155	0.0	22.1	A
	22.1	23.0	B
	23.0	24.0	A
	24.0	24.5	C
	24.5	24.9	BX
	24.9	25.7	B
	25.7	33.0	C
	33.0	36.7	B
	36.7	44.4	BX

SR	MP	MP	CLASS
155	44.4	44.9	C
	44.9	72.3	BX
	72.3	78.1	B
	78.1	78.9	A
	78.9	79.4	C
Equation	079.37 BK =	079.63 AH	
	79.6	80.5	C
155Spur	80.1	80.5	C
160	0.0	7.5	BX(p)
161	0.0	1.0	BX
	1.0	2.8	C
	2.8	3.4	BX
	3.4	5.6	C
	5.6	6.2	BX
	6.2	8.2	C
	8.2	9.5	BX
	9.5	13.0	C
	13.0	13.2	BX
	13.2	15.3	C
	15.3	15.9	BX
	15.9	16.2	C
	16.2	17.5	BX
	17.5	25.8	C
	25.8	29.9*	
* Coincident with SR 512	8.7	13.0	
* Coincident with SR 167	5.3	6.1	
Equation	029.89 BK =	028.69 AH	
	28.7	29.1	C
	29.1	29.6	BX
	29.6	35.0	C
162	0.0	0.8	C
Equation	000.83 BK =	003.21 AH	
	3.2	7.5	C
	7.5	10.7	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
162	10.7	19.8	C
163	0.0	3.4	BX(p)
164	0.3	5.2	C
	5.2	5.6	BX
	5.6	9.3	C
	9.3	14.5	BX
	14.5	15.1	C
165	0.0	4.5	A
	4.5	7.4	BX
	7.4	7.8	A
	7.8	16.5	BX
	16.5	17.2	C
	17.2	18.5	BX
	18.5	20.2	C
	20.2	21.2	BX
166	0.0	3.0	BX
	3.0	4.6	C
166Spur	3.9	4.0	BX(p)
167	0.0	5.8	C *
	*Future	Route	
	5.8	6.4	D
	6.4	6.6	BX
Equation	006.58 BK =	005.26 AH	
	5.3	7.8	BX
	7.8	8.7	C
	8.7	13.0	BX
	13.0	14.0	C
	14.0	18.1	BX
	18.1	27.2	C
167Cou/Puy	5.7	6.3	BX(p)
169	0.0	1.0	C
	1.0	3.0	BX
	3.0	3.4	C
	3.4	7.0	BX
	7.0	8.6	C

SR	MP	MP	CLASS
169	8.6	9.5	B
	9.5	13.6	BX
	13.6	24.3	C
	24.3	25.3	D
170	0.0	3.7	C
171	0.0	1.0	C
	1.0	4.0	D
172	0.0	5.5	BX
	5.5	8.4	C
	8.4	9.1	BX
	9.1	25.1	C
	25.1	26.5	B
	26.5	29.1	C
	29.1	30.6	B
	30.6	35.1	C
173	0.0	1.7	C
	1.7	2.7	BX
	2.7	8.8	C
	8.8	10.5	BX
	10.5	11.0	B
	11.0	12.0	D
174	0.0	2.1	AX
	2.1	13.2	BX
	13.2	14.2	AX
	14.2	17.1	BX
	17.1	18.9	B
	18.9	19.8	A
	19.8	23.4	C
	23.4	25.1	AX
	25.1	26.0	B
	26.0	27.2	A
	27.2	30.0	B
	30.0	31.0	BX
	31.0	37.0	B
	37.0	40.7	BX
174Spur	19.5	20.6	A
	20.6	20.9	B

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
181	5.3(a)	5.5	C
	5.5	6.0	D
	6.0	8.0	C
	8.0	11.4	D
182	0.0	14.4	BX(p)
193	0.0	1.4	C
	1.4	2.0	BX
	2.0	3.1	B
194	0.0	21.1	BX(p)
195	0.1	5.0	BX
	5.0	8.3	C
	8.3	12.0	BX
	12.0	20.0	C
	20.0	36.8	BX
	36.8	39.0	C
	39.0	40.0	BX
	40.0	46.0	C
	46.0	47.6	BX
	47.6	48.4	C
	48.4	62.3	BX
	62.3	80.2	B
	80.2	80.5	C
	80.5	93.0	BX
	93.0	96.0	C
195Spur	0.1	0.6	BX(p)
197	0.0	0.6	B
	0.6	3.2	A
202	0.0	2.3	C
	2.3	4.6	BX
	4.6	11.4	C
	11.4	12.5	BX
	12.5	23.9	C
	23.9	26.0	BX
	26.0	27.7	C
	27.7	28.7	BX
	28.7	29.9	C
	29.9	30.2	BX(p)
	30.2	30.6	BX(p)

SR	MP	MP	CLASS
202Cou/Red	7.3	7.7	BX(p)
203	0.0	2.6	C
	2.6	3.2	BX
	3.2	23.3	C
	23.3	23.8	BX
	23.8	24.2	C
204	0.0	0.7	C
	0.7	1.1	BX
	1.1	2.4	C
205	26.3	27.2	B
	27.2	30.5	BX
	30.2	31.4	C
	31.4	34.4	BX
	34.4	37.2	C
206	0.0	0.5	C
	0.5	15.4	BX
207	0.0	1.0	BX
	1.0	4.4	C
211	0.0	15.2	BX
215	0.0	6.2	C
221	0.0	0.4	BX
	0.4	1.5	AX
	1.5	23.6	BX
	23.6	25.9	A
	25.9	26.1	BX
223	0.0	3.8	C
224	0.0	6.3	BX
	6.3	7.9	D
	7.9	9.9	C
225	0.0	11.3	BX(p)
231	0.0	14.7	BX
	14.7	15.6	B
	15.6	16.2	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
231	16.2	17.2	BX
	17.2	21.2	C
	21.2	26.1	BX
	26.1	28.1	C
	28.1	31.1*	
* Coincident with SR 002	261.1	264.0	
	31.1	31.5	C
	31.5	34.0	BX
	34.0	35.6	C
	35.6	42.1	BX
	42.1	43.8	B
	43.8	49.0	BX
	49.0	50.3	C
	50.3	55.4	BX
	55.4	65.3	C
	65.3	69.6	BX
	69.6	71.9	C
	71.9	15.2	BX
240	0.0	28.8	BX
Equation	28.8 BK =	30.6 AH	
	30.6	33.0	C
	33.0	34.3	BX
	34.3	34.9	C
	34.9	36.1*	
* Coincident with SR 182	3.9	5.0	
	36.1	39.5	C
	39.5	43.2	BX
241	0.0	8.0	BX(p)
	8.0	8.6	D
	8.6	9.6	BX
	9.6	10.6	C
	10.6	25.2	BX
243	0.0	20.0	BX
	20.0	21.3	C
	21.3	28.3	BX
251	0.0	0.5	C
	0.5	3.7	BX

SR	MP	MP	CLASS
251	3.7	4.5	AX
	4.5	10.8	BX
260	0.0	4.3	C
	4.3	5.9	BX
	5.9	7.5	C
	7.5	12.2	BX
Equation	012.19 BK =	013.71 AH	
	13.7	24.5	BX
	24.5	25.2	C
	25.2	38.6	BX
	38.6	39.5	C
261	0.0	10.0	C
	10.0	14.6	BX
	14.6	15.2	A
	15.2	29.4	BX
	29.4	35.8*	
* Coincident with SR 260	33.1	39.5	
	35.8	36.3	C
	36.3	53.2	B
	53.2	53.5	C
	53.5	62.8	BX
262	0.0	24.2	BX(p)
263	0.0	9.2	BX(p)
270	0.0	9.9	C
270Cou/Pul	2.7	2.9	BX(p)
271	0.0	9.0	BX
272	0.0	2.2	C
	2.2	15.8	BX
	15.8	16.5	C
	16.5	16.8*	
* Coincident with SR 027	15.1	15.3	
	16.8	18.0	C
	18.0	19.2	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
274	0.0	0.5	C
	0.5	1.6	BX
	1.6	1.9	C
278	0.0	5.5	BX(p)
281	0.0	9.8	BX
	9.8	10.5	C
281Spur	2.6	4.3	BX
282	0.0	1.8	C
	1.8	4.9	BX
283	0.0	14.7	BX
	14.7	14.9	C
285	0.3	5.0	BX(p)
285Cou	2.9	4.6	BX(p)
290	0.0	6.3	D
	6.3	18.4	C
290Spur	0.7	1.3	BX(p)
291	0.0	1.4	C
	1.4	6.0	BX
	6.0	7.1	C
	7.1	7.4	BX
	7.4	9.0	C
	9.0	13.5	BX
	13.5	14.2	C
	14.2	20.3	BX
	20.3	21.3	C
	21.3	33.0	BX
292	0.0	5.0	BX
	5.0	5.9	C
300	0.0	2.9	BX
	2.9	3.3	C
302	0.0	1.3	BX(p)
	1.3(a)	7.7(a)	BX

SR	MP	MP	CLASS
302	7.7(a)	10.6(a)	BX(p)
	10.6(a)	16.0	BX
	16.0	16.8	C
303	0.0	0.7	C
	0.7	1.5	BX
	1.5	5.4	C
	5.4	9.2	BX(p)
303Spur	1.5	3.0	C
	3.0	3.3	A
	3.3	3.4	C
304	0.0	0.9	BX
	0.9	1.2	D
	1.9	3.2	D
	3.2	3.5	C
305	0.0	0.2	C
	0.2	11.4	BX
	11.4	11.9	C
	11.9	12.5	BX
	12.5	12.9	C
	12.9	13.3	BX
307	0.0	5.4	BX(p)
308	0.0	2.3	C
310	0.0	1.8	BX(p)
395	0.0	13.0*	
* Coincident with SR 82	132.6	112.8	
	13.0	14.2	A
	14.2	15.5	BX
	15.5	20.5	C
	20.5	22.8*	
* Coincident with SR 182	12.2	14.4	
	22.8	25.2	C
	25.2	28.2	BX
	28.2	40.6	C
	40.6	45.0	BX
	45.0	56.0	B

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
395	56.0	95.9	BX
	95.9	158.5	*
* Coincident with SR 090	220.5	281.3	
	158.5	164.5	*
* Coincident with SR 002	286.9	292.9	
	164.5	167.0	D
	167.0	168.0	C
	168.0	170.2	BX
	170.2	172.5	B
	172.5	178.0	BX
	178.0	190.3	C
	190.3	201.6	BX
	201.6	205.1	B
	205.1	208.4	C
	208.4	215.7	BX
	215.7	216.0	C
	216.0	228.6	BX
	228.6	229.6	C
	229.6	230.2	D
	230.2	230.7	C
	230.7	232.3	BX
	232.3	233.4	C
	233.4	237.8	BX
	237.8	241.3	C
	241.3	243.7	BX
	243.7	245.3	C
	245.3	248.0	BX
	248.0	249.4	C
	249.4	260.0	BX
	260.0	260.5	C
	260.5	270.3	BX
397	0.0	11.2	BX(p)
401	0.0	9.7	BX
	9.7	12.1	C
405	0.0	6.7	C
	6.7	9.7	BX
	9.7	11.1	C
	11.1	11.5	B
	11.5	11.8	BX
	11.8	17.0	C

SR	MP	MP	CLASS
405	17.0	18.3	BX
	18.3	23.0	C
	23.0	24.0	B
	24.0	30.3	BX
409	0.0	3.9	C
410	0.0	5.8	C
	5.8	6.4	D
	6.4	6.6	BX
	6.6	8.8	*
* Coincident with SR 167	5.3	7.1	
	8.8	13.0	BX
	13.0	13.4	C
	13.4	14.0	B
	14.0	19.6	C
	19.6	20.3	BX
	20.3	21.2	C
	21.2	21.4	BX
	21.4	38.0	C
	38.0	39.0	BX
	39.0	42.4	B
	42.4	43.0	BX
	43.0	56.3	B
	56.3	91.8	A
	91.8	107.8	BX
	107.8	110.8	BX
	110.8	116.4	B
411	0.0	1.8	BX(p)
	1.8	2.3	D
	2.3	4.4	BX(p)
	4.4	5.9	C
	5.9	10.8	BX
	10.8	13.5	C
411Spur	1.7	1.9	BX(p)
432	0.0	5.1	BX(p)
	5.1	6.7	C
	6.7	7.2	D
	7.2	10.3	C
433	0.0	0.9	-

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
500	0.0	3.9	BX
	3.9	4.5	C
	4.5	5.3	BX
	5.3	20.4	C
501	0.0	1.2	C
	1.2	2.6	D
	2.6	5.3	C
	5.3	10.8	BX
	10.8	12.7	AX
Proposed Route.	12.7	16.9	
	16.9	18.7	C
	18.7	19.9	BX
502	0.0	3.9	C
	3.9	4.5	BX
	4.5	6.5	C
	6.5	7.6	BX
503	0.0	8.6	C
	8.6	13.6	BX
	13.6	18.4	C
	18.4	19.5	BX
	19.5	22.4	C
	22.4	24.1	BX
	24.1	25.6	C
	25.6	26.6	BX
	26.6	30.0	C
	30.0	30.3	BX
	30.3	32.1	C
	32.1	33.0	BX
	33.0	33.4	C
	33.4	34.0	BX
	34.0	34.7	C
	34.7	38.1	BX
	38.1	40.4	C
	40.4	43.5	BX
	43.5	54.4	C
503Spur	31.3	39.7	BX(p)
504	0.0	2.2	C
	2.2	3.0	BX
	3.0	4.0	C
	4.0	8.8	BX

SR	MP	MP	CLASS
504	8.8	11.4	C
	11.4	17.6	BX
	17.6	21.0	B
	21.0	40.8	BX(p)
505	0.0	3.8	BX(p)
	3.8	5.6	C
	5.6	6.0	BX
	6.0	10.1	C
	10.1	18.1	BX
	18.1	19.3	C
506	0.0	6.6	C
	6.6	10.0	BX
	10.0	11.5	C
507	0.0	18.0	C
	18.0	21.0	BX
	21.0	24.9	C
	24.9	25.8	BX
	25.8	28.7	C
	28.7	30.5	BX
	30.5	33.7	C
	33.7	35.0	BX
	35.0	37.0	C
	37.0	43.6	BX
507Spur	2.3	3.5	BX(p)
508	0.0	0.2	B
	0.2	0.4	BX
	0.4	1.5	C
	1.5	2.8	B
	2.8	14.0	C
	14.0	16.5	BX
	16.5	17.7	C
	17.7	24.5	BX
	24.5	32.8	C
509	0.0	3.2	BX(p)
	3.2B	6.4B	BX(p)
Equation	6.4BK = 3.2 AH		
	3.2	5.0	C
	5.0	5.6	BX
	5.6	10.3	C

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
509	10.3	11.2	BX
	11.2	14.3	C
	14.3	18.4*	
* Coincident with SR 099 and SR 516	11.4 and 0.0	12.5 and 1.8	
	18.4	19.6	*
* Coincident with SR 516	0.0	1.8	
Equation	020.2 BK =	019.6 AH	
	19.6	20.3	D
	20.3	27.7	C
	27.7	29.5	BX
	29.5	29.8	C
510	0.0	0.5	C
Equation	000.50 BK =	002.62 AH	
	2.6	3.0	C
	3.0	3.8	BX
Equation	003.82 BK =	004.28 AH	
	4.3	6.3	C
	6.3	8.9	BX
	8.9	13.0	C
	13.0	14.8	BX
	14.8	15.7	C
512	0.0	1.0	BX
	1.0	4.3	C
	4.3	5.0	BX
	5.0	8.8	C
	8.8	12.0	BX
513	0.0	3.4	C
515	0.0	7.8	C
516	0.0	1.0	BX
	1.0	2.3	C
	2.3	3.9	BX
	3.9	16.2	C

SR	MP	MP	CLASS
518	0.0	3.8	C
519	0.0	1.3	BX(p)
520	0.0	0.8	BX
	0.8	1.6	C
	1.6	4.0	A
	4.0	5.5	C
	5.5	5.8	BX
	5.8	7.4	C
	7.4	12.5	BX
	12.5	13.0	C
522	0.0	1.4	D
	1.4	2.0	C
	2.0	4.4	D
	4.4	6.7	C
	6.7	8.2	D
	8.2	9.2	C
	9.2	10.4	D
	10.4	20.5	C
	20.5	24.7	BX
523	0.0	2.5	BX(p)
524	0.0	0.1	BX
	0.1	1.4	C
	1.4	1.8	BX
	1.8	3.4	C
	3.4	3.7	D
	3.7	5.3	C
	5.3	14.6	BX(p)
524Sp/3Av	0.0	0.7	BX(p)
524Sp/Cwy	4.6	5.1	C
525	0.0	2.8	BX
	2.8	7.2	C
	7.2	8.5	BX
	8.5	8.7	B
	8.7	9.4	C
	9.4	14.3	BX
	14.3	14.9	C
	14.9	30.5	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
526	0.0	0.3	BX
	0.3	0.8	C
	0.8	2.3	B
	2.3	4.6	C
	0.0	9.5	C
527	0.0	9.5	C
	9.5	10.4	BX
	10.4	11.9	C
528	0.0	0.4	D
	0.4	3.5	BX(p)
529	0.0	4.3	BX(p)
	4.3	6.5	C
	6.5	6.7	D
529Spur	0.4	0.6	BX(p)
530	17.0	20.8	BX
	20.8	20.9*	
* Coincident with SR 009	29.5	29.6	
	20.9	25.6	C
	25.6	27.5	BX
	27.5	35.8	C
	35.8	49.1	BX
	49.1	50.1	C
	50.1	52.5	BX
	52.5	54.8	C
	54.8	67.7	BX
531	0.0	9.9	BX(p)
532	0.0	3.7	BX
	3.7	5.3	C
	5.3	5.8	BX
	5.8	6.8	C
	6.8	8.0	BX
	8.0	10.1	C
534	0.0	1.0	BX
	1.0	5.1	C

SR	MP	MP	CLASS
536	0.0	3.4	BX
	3.4	4.1	C
	4.1	5.4	D
538	0.0	0.6	D
	0.6	1.3	C
	1.3	2.8	BX
	2.8	3.7	C
539	0.0	8.2	C
	8.2	10.2	BX
	10.2	11.0	D
	11.0	11.5	C
	11.5	15.2	BX
542	0.0	9.0	C
	9.0	20.5	BX
	20.5	21.5	C
	21.5	23.5	BX
	23.5	25.3	C
	25.3	25.6	BX
	25.6	26.3	C
	26.3	29.1	BX
	29.1	29.5	AX
	29.5	30.7	B
	30.7	33.6	BX
	33.6	48.0	AX
	48.0	57.3	A
542Cou/MtB	54.6	55.0	BX(p0)
543	0.0	1.1	C
544	0.0	0.4	C
	0.4	1.0	BX
	1.0	2.6	C
	2.6	4.2	BX
	4.2	9.0	C
546	0.0	3.5	BX
	3.5	8.0	C
547	0.0	8.3	C
	8.3	10.7	BX

Utilities Scenic Classification of State Highways

SR	MP	MP	CLASS
548	0.0	13.9	BX(p)
599	0.0	1.7	C
702	0.0	1.5	C
	1.5	2.5	BX
	2.5	3.9	C
	3.9	4.9	BX
	4.9	7.0	C
	7.0	7.8	BX
	7.8	9.3	C
Over view of Tacoma	And Bay	Mt Rainier	
705	0.7	1.5	C
706	0.0	2.5	C
	2.5	3.0	BX
	3.0	4.2	C
	4.2	5.8	BX
	5.8	13.6	C
730	0.0	3.0	BX
	3.0	4.3	AX
	4.3	6.1	BX
730Spur	5.8	6.1	BX(p)
821	0.0	1.0	B
	1.0	2.0	BX
	2.0	13.9	B
	13.9	14.5	A
	14.5	23.7	B
	23.7	23.9	A
	23.9	25.2	BX
823	0.0	0.6	C
	0.6	4.7	BX(p)

SR	MP	MP	CLASS
900	5.9	11.5	C
	11.5	12.5*	
* Coincident with SR 405	4.5	5.4	
	12.5	21.6	C
900Cou/Ren	10.7	11.4	BX(p)
902	0.0	4.1	BX(p)
	4.1	5.9	BX
	5.9	7.7	C
	7.7	12.4	BX
903	0.0	2.7	C
	2.7	3.8	BX
	3.8	6.1	C
	6.1	7.0	BX
	7.0	8.2	C
	8.2	10.0	BX
903Spur	0.2	0.5	BX(p)
904	0.0	0.8	C
	0.8	8.7	BX
	8.7	16.9	C
906	0.0	1.9	C
	1.9	2.6	BX
906Spur	2.6	3.0	BX(p)
908	3.5	6.6	C
908Cou/Red	6.7	6.9	BX(p)
970	0.0	2.7	C
971	0.0	15.0	BX(p)